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ABSTRACT

GRADES OR AGES: Grades 7-12. SUBJECT MATTER: Art. ORGANIZATION AND PHYSICAL APPEARANCE: The guide is divided into 17 chapters in either straight text or list form, illustrated with examples of student art products. It is mimeographed and spiral bound with a paper cover. OBJECTIVES AND ACTIVITIES: A philosophy of art education and related general and specific objectives are outlined in the first three chapters. The remainder of the guide contains scope and sequence charts, outlines for the course of study at junior high and senior high school levels, several suggested lesson plans for each grade level, and detailed descriptions of suggested activities in various areas of art. These areas are divided into two categories: 1) major areas, which include drawing, printmaking, painting, and three-dimensional design, and 2) related areas, which include artistic crafts, pottery, and commercial art. Suggestions for field trips, exhibitions of student products, and an outline for a course in art appreciation are also included. INSTRUCTIONAL MATERIALS: Materials needed for an activity are listed with the activity description. In addition the guide contains extensive lists of materials and suppliers, vocabulary lists, biographies of artists, and a 10-page bibliography of books and journals. STUDENT ASSESSMENT: No mention. (RT)

ART CURRICULUM GUIDE

Secondary Schools

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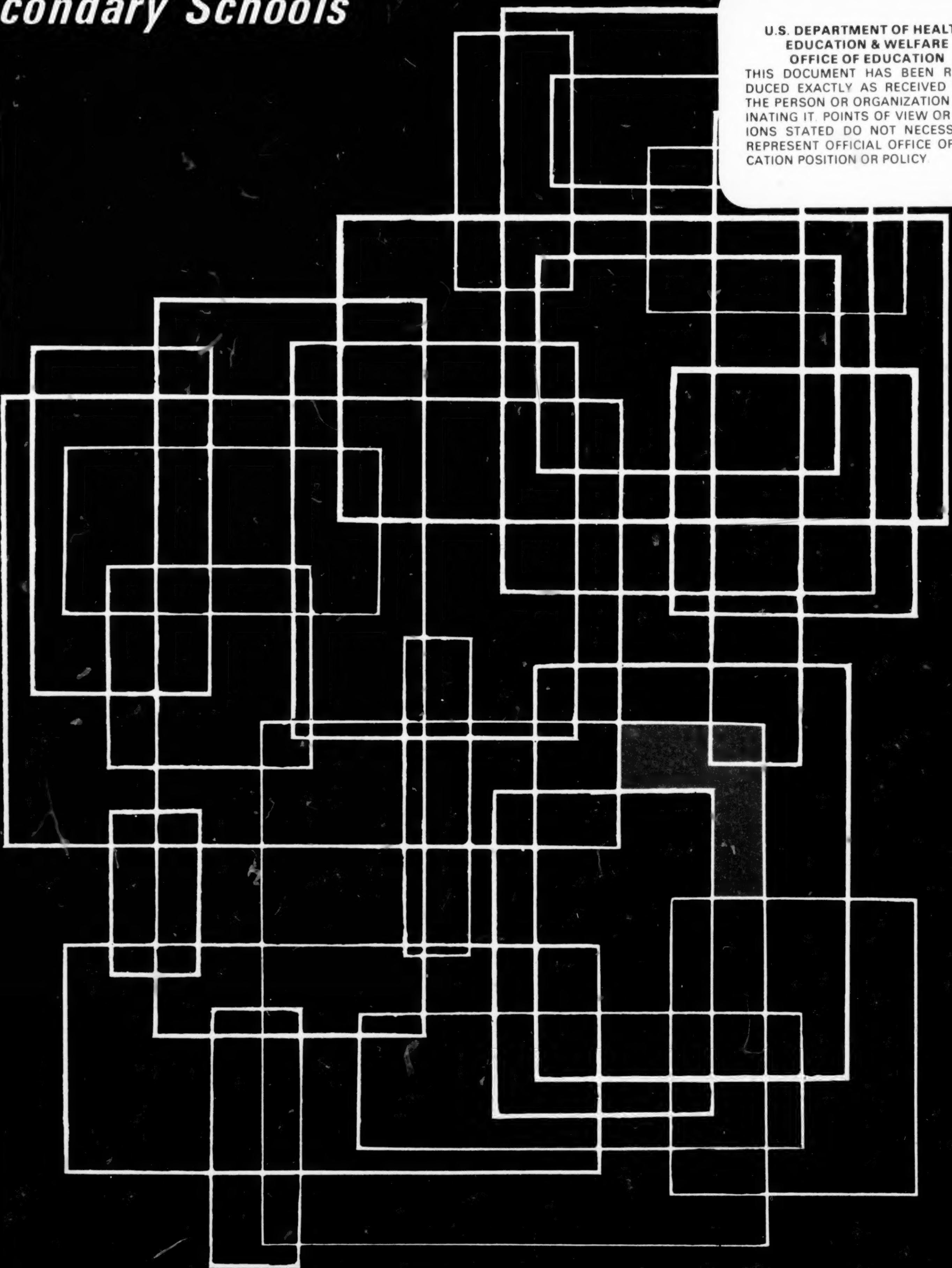

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Bloomington, Minn.
September 1968

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secondary ART guide

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bloomington school philosophy

the philosophy of education must profess the belief that each child should develop his potential to the fullest, and to meet his intellectual, moral, spiritual, aesthetic, vocational, physical and social needs as an individual, an American citizen and a member of the world community.

we believe in the following:

the value of the individual personality.

the worth of the individual.

the individual's potentialities.

the individual patterns of human growth.

the individuality of learning.

the value of good mental and physical health of the individual.

the importance of the moral and spiritual values of the individual.

the individual's need to identify with groups.

the value of creative instruction.

the continuous educational research and utilization of its findings.

the value of excellence in all instruction.

the philosophy of the bloomington elementary school ART program

that each child is by nature an artist.

that ART can serve to help release the creative potential of each child.

that ART can and will enable the individual to live life to its fullest extent.

that the basic concepts and precepts of a democratic society can best be served by thinking, free-minded individuals, and ART can help maintain these ideals.

that ART can develop the capacity for judgment and choices that are compatible with the beliefs of our society.

that both the child and the teacher profit by the interchange of ideas and cooperations that ART projects entail.

that the non-verbal child may express himself in this field as in no other, and should be given this opportunity. we have the responsibility to present this opportunity.

that ART has been an area for experimentation and exploration and thus has made many contributions to our society and must be maintained so that continued benefits can be realized.

that no person is whole until all facets of his personality, creativity, and intellectual capacity are realized and the ART program encourages this development and awakening.

that ART, in itself, is a worthwhile activity.

the philosophy of the bloomington secondary school ART program

ART is not only for the talented, it is for everyone. each person should have the opportunity to express himself and to find his own means of doing so.

an ART teacher should suggest, direct, sympathize, recommend, acknowledge, respect and acclaim. the ART teacher must at all times keep the four aspects of ART in mind; impulse, emotion, personal and visual result, and influence, and must realize that each be allowed its full measure in the scheme of child development.

emphasis should be placed on the creative and exploratory freedom necessary for maximal development of the students' capacities with flexibility of the curriculum at all times kept in mind, and adjusted to the needs of the student.

the ART work should be inspired and directed with the minimum of intervention, with the goal being to share in the development of a student who can think and act creatively, be open-minded and responsive to ideas, be productive and be adjusted to our contemporary society.

ART should provide the student with exploration and experimentation in many medias, sharpen perception of aesthetic qualities, and increase ART knowledge and skill. it should provide experiences which would educate the students toward seeking and enjoying beauty, and (toward) seeking the creation of more harmonious surroundings.

in ART teaching, student learns from teacher, and teacher learns from student.

basic philosophy

what is ART? . . . . . ART is not any one thing. ART is everything and everywhere, and like beauty, it is in the eye of the beholder. it is found through inner and visual emotion. ART is a progressive series of four things, including both the concrete and the abstract. first it is an urge, idea, or basic impusle; then a feeling of emotional creativity; then a visual and personal result; and last in point of time, an influence. all are equally important and one part cannot survive without the others.

to the student ART is an emotional chance to express moods, feelings, wants, and impressions. it is dabs of paint, camels' hair brushes, slabs of clay, coarse papers, cutting knives, colors, textures, thoughts, simplicity, and beauty combined to use as one wishes to create. i like ART for these reasons and am glad when i can use medias as i want. ART, to me, isn't a stiff form but a free, yet planned, expression of my own.*

ART teachers believe: ART is a basic impulse; ART is visual and personal; some students are visual and some are non-visual; classroom situations are different, therefore, the classes cannot be taught the same; classroom facilities facilitate good teaching; no two ART educators teach alike because of emotions, sex, personality, environment, experiences and attitudes; the community plays a large role in the type of individual ART interests.

*student written

the ART teacher is a working ARTist or craftsman in his own right. when the ART teacher comes to the classroom trained and personally prepared to teach, he comes as an ARTist with broad experiences in varied fields of ART. through these experiences and active participation in the creative process "himself," he is able to understand the "creative processes" experienced by his students.

an ART teacher has a responsibility like no other teacher. he or she must have personal ideas, but still be able to blend with the students' ideas and stir creativeness and enthusiasm without set rules. the teacher must be able to give criticism and encouragement, and must know and convey to students just what dash of color will give life to the subjects they have created.

general objectives

to apply the activity of ART to the process of learning.

to encourage creative expression of individual ideas and interests.

to develop appreciation, attitudes and social growth through ART, as it integrates with students in their daily experiences.

to provide a pleasant experience for all students.

to provide guidance for the students interested in pursuing ART as a career or leisure time activity.

specific objectives

understanding

to develop appreciation

to develop social understanding

to develop desirable attitudes

to develop manipulative skills

respect

to create respect for new ideas

to create respect for individuality

to create respect for his own experiments

to create respect for his and others' work

to create an awareness as a guide for future selection of materials and experiences

encouragement

to encourage creative expression

to encourage free expression

to encourage originality

to encourage self-reliance

to encourage fortitude

enthusiasm

- for the child's ideas
- for the child's art growth
- for the child's expression of ideas
- for the utilization of the child's experiences

application

- to teach uses of materials
- to teach uses of tools
- to teach uses of the techniques

ART aims

these aims are defined from the viewpoint of child growth

draw - drawing (a sketch)

- development of manual skills
- development of eye coordination
- development of mind, idea and thought
- development of the hand to create

paint - painting (create a picture)

- development of communicative skills
- development of techniques
- development of expression
- development of knowledge
- development of appreciation of color

print - printing (stamp with design)

- development of experimental duplication
- development of the ability to reproduce in quantity
- development of a process

lettering - (to letter) in commercial ART

- development of types
- development of techniques
- development of drawing letter design

two-dimensional design - (design in space)

development of all medias

development to create the basis for ideas

three-dimensional design

development of experimentation in space conception

ceramics - (working with clay)

development of manipulative skills

development, experiment and exploration of the possibilities of the material

sculpture - (to change in form)

development of manipulation of tools and media

development and experiment with form in three-dimension

ART appreciation

development of appreciation for artists' work - past and present

development of appreciation for work of classmates.

ELEMENTARY SCOPE AND SEQU

KINDERGARTEN	GRADE ONE	GRADE TWO	GRADE TH
1. TO ENABLE THE CHILD TO EXPRESS HIMSELF APPROPRIATELY TO MATURITY AND GROWTH PERIOD UNIQUE TO HIMSELF.	1. To enable the child to express himself appropriately to maturity and growth period unique to himself.	1. To enable the child to express himself appropriately to maturity and growth period unique to himself.	1. To enable the chi himself appropriate and growth period self.
2. TO INTRODUCE CONCEPT OF COLOR DEALING WITH BASIC HUES: RED, YELLOW, BLUE, GREEN, ORANGE, PURPLE, BLACK, BROWN.	2. To introduce concept of color dealing with basic hues: red, yellow, blue, green, orange, purple, black, brown.	2. To introduce concept of color dealing with basic hues: red, yellow, blue, green, orange, purple, black, brown, PINK, TAN, GRAY — AND VALUES OF LIGHTNESS OR DARKNESS.	2. To introduce con dealing with hues blue, green, orange, brown, pink, tan, g AND INTENSITIE NESS OR DULLN
3. TO DEVELOP VISUAL AWARENESS OF SHAPE AND SIZE.	3. To develop visual awareness of shape and size.	3. To develop visual awareness of shape and size . . . WITH DETAILS ASSUMING MORE IMPORTANCE.	3. To develop visual shape, size and SENSE OF PROP REALISM.
4. TO DEMONSTRATE PROPER USES OF ART MATERIALS AND TOOLS. FINGER PAINTING TEMPERA CRAYON CLAY MODELING PAPER PRINTING CHALK CONSTRUCTIONS PAPIER MACHE SCRAPS YARN & STRING *WOOD *PLASTICS *PRINTING	4. To demonstrate proper uses of materials and tools Finger Painting Tempera Crayon Clay Modeling Paper Printing Chalk Constructions Papier Mache Scraps Yarn & String *Wood *LEATHER *Printing	4. TO DEMONSTRATE EXTENDED USE OF MATERIALS AND ADDED RESPONSIBILITY OF CARE IN Finger Painting Tempera Crayon Clay Modeling Paper Printing Chalk Constructions Papier Mache Scraps Yarn & String SAWDUST PAPER SCULPTURE *Wood *METAL *Printing	4. To demonstrate ex materials and adde of care in: Finger Painting Tempera Clay Modeling Paper Printing Chalk Constructions Papier Mache Scraps Yarn & String Sawdust Paper Sculpture PLASTER WATER COLOR *Wood *Leather *Printing
5. TO DEVELOP CONTROL OF LARGE MUSCLES.	5. To develop control of large muscles.	5. To develop control of large muscles, WITH SOME SMALL MUSCLE ACTIVITY.	5. To continue develop cular control with muscle development.
6. TO PROVIDE EXPERIENCES LEADING TO PUPIL AWARENESS OF EXHIBITS AND DISPLAYS.	6. To provide experiences leading to pupil PARTICIPATION of exhibits and displays.	6. To provide experiences for pupil participation in the PLANNING AND EXECUTING OF exhibits, displays, AND BULLETIN BOARDS.	6. To provide experie participation in pla cuting exhibits, dis boards and DIOR AN AWARENESS RELATIONSHIPS.
7. TO BUILD AND MAINTAIN THE CREATIVE RESPONSE OF CHILDREN TO THEIR ENVIRONMENT.	7. To build and maintain the creative response of children to their environment.	7. To build and maintain the creative response of children to their environment.	7. To build and main tive response of ch environment.
8. TO INCLUDE THE CLASSROOM AND SCHOOL ENVIRONMENT IN BUILDING RELATIONSHIPS THROUGH MEANINGFUL ART EXPERIENCES.	8. To include the classroom and school environment in building relationships through meaningful art experiences.	8. To include the classroom and school environment in building relationships through meaningful art experiences . . . WITH INCREASED CORRELATION OF ART WITH OTHER CURRICULUM ACTIVITIES.	8. To include the c school environment relationships throug art experiences . . ed correlation of a curriculum activitie
9. TO DEVELOP CRITERIA FOR SELF-EVALUATING ART PRODUCTS IN RELATIONSHIP TO ONESELF.	9. To develop criteria for self-evaluating art products in relationship to oneself.	9. To develop criteria for self-evaluating art products in relationship to oneself.	9. To develop criteria ting art products to oneself.
10. TO AID THE CHILD IN RELATING HIMSELF TO THE CLASSROOM PEER GROUP WITHIN THE FRAMEWORK OF A GROUP SITUATION.	10. To aid the child in relating himself to the classroom peer group within the framework of a group situation.	10. To aid the child in relating himself to the classroom peer group within the framework of a group situation.	10. To aid the child in self to the classroo within the framewo situation IN A GROUP PROJECTS
11. TO HELP CHILD SEE THE RELATIONSHIP OF ART TO DAILY LIVING.	11. To help child see the relationship of art to daily living.	11. To help child see the relationship of art to daily living.	11. To help child see t of art to daily livin

Capitals indicate concepts new to grade level.
**Refer to Elementary Constructions Guide (Art Guide Supplement)*

ND SEQUENCE OF PROJECT OBJECTIVES

GRADE THREE	GRADE FOUR	GRADE FIVE	GRADE SIX
1. To enable the child to express himself appropriately to maturity and growth period unique to himself.	1. To enable the child to express himself in a manner which is appropriate to his maturity and the growth period unique to himself.	1. To enable the child to express himself in a manner which is appropriate to his maturity and the growth period unique to himself.	1. To enable the child to express himself in a manner which is appropriate to his maturity and the growth period unique to himself.
2. To introduce concept of color dealing with hues — red, yellow, blue, green, orange, purple, black, brown, pink, tan, gray - VALUES AND INTENSITIES OF BRIGHTNESS OR DULLNESS.	2. To extend concept of color dealing with hues — red, yellow, blue, green, orange, purple, black, brown, pink, tan, gray — values, intensities, SHADOWS, WARMTH AND COOLNESS OF COLOR TONES AND AWARENESS OF PERSONAL RESPONSE TO COLOR.	2. To extend concept of color dealing with hues — red, yellow, blue, green, orange, purple, black, brown, pink, tan, gray — values, intensities, shadows, warmth and coolness of color tones, MOODS AND FEELINGS.	2. To extend concept of color dealing with hues — red, yellow, blue, green, orange, purple, black, brown, pink, tan, gray — values, intensities, shadows, warmth and coolness of color tones, moods, and feelings.
3. To develop visual awareness of shape, size and details with SENSE OF PROPORTION AND REALISM.	3. To extend a sense of visual awareness concerning shape, size and details with a sense of proportion and realism AND A FEELING OF ACTION.	3. To extend a sense of size, shape, detail, proportion, realism, a feeling of action, SIMPLE PERSPECTIVE, TEXTURE, SHADING AND PATTERNS OF LIGHT AND DARK.	3. To extend a sense of size, shape, detail, proportion, realism, a feeling of action, simple perspective and texture. Shading and patterns of light and dark in his PAINTINGS AND DESIGNS BECOMING MORE NOTICEABLE.
4. To demonstrate extended use of materials and added responsibility of care in: Finger Painting Tempera Clay Modeling Paper Printing Chalk Constructions Papier Mache Scraps Yarn & String Sawdust Paper Sculpture PLASTER WATER COLOR *Wood *Leather *Printing	4. To increase variety of art materials, more responsibility for care of and preparation of materials in: Finger Painting Tempera Clay Modeling Paper Printing Chalk Constructions Papier Mache Scraps Yarn & String Sawdust Plaster Paper Sculpture Water Color CHARCOAL *Wood *Metal *Plastics *Printing	4. To increase variety, responsibility for care of and preparation of materials in: Finger Painting Tempera Clay Modeling Paper Printing Chalk Constructions Papier Mache Scraps Sawdust Plaster Yarn & String Paper Sculpture Water Color Charcoal *Wood *Plastics *Leather *DRAWING *Printing	4. To increase variety and responsibility for the care of and preparation of materials in: Finger Painting Tempera Clay Modeling Paper Printing Chalk Constructions Papier Mache Scraps Sawdust Plaster Yarn & String Paper Sculpture Water Color Charcoal *Wood *Metal *Drawing *Printing
5. To continue development of muscular control with added small muscle development.	5. To continue development of muscular control with added small muscle development.	5. To continue development of muscular control with added small muscle development and CO-ORDINATION BETWEEN EYE AND HAND.	5. Continued growth of large and small muscle dexterity with continued emphasis on coordination between eye and hand.
6. To provide experiences for pupil participation in planning and executing exhibits, displays, bulletin boards and DIORAMAS WITH AN AWARENESS OF SPATIAL RELATIONSHIPS.	6. To provide experiences for pupils to ASSUME MAJOR RESPONSIBILITY IN planning and executing exhibits, displays, bulletin boards and dioramas with an awareness of spatial relationships.	6. To provide experiences for pupils to assume major responsibility in planning and executing exhibits, displays, bulletin boards and dioramas with an awareness of spatial relationships.	6. To provide experiences for pupils to assume major responsibility and participation in planning and executing exhibits, displays, bulletin boards and dioramas with an awareness of spatial relationships.
7. To build and maintain the creative response of children to their environment.	7. To build and maintain the creative response of children to their environment.	7. To build and maintain the creative response of children to their environment WITH CONTINUED GROWING EMPHASIS ON CREATIVENESS.	7. To build and maintain the creative response of children to their environment with continued growing emphasis on creativeness.
8. To include the classroom and school environment in building relationships through meaningful art experiences . . . with increased correlation of art with other curriculum activities.	8. To include the classroom and school environment in building relationships through meaningful art experiences . . . with increased correlation of art with other curriculum activities.	8. To include the classroom and school environment in building relationships through meaningful art experiences with increased correlation of art with other curriculum activities and INDIVIDUALIZED PROJECTS EMERGING.	8. To include the classroom and school environment in building relationships through meaningful art experiences with increased correlation of art with other curriculum activities and individualized projects emerging.
9. To develop criteria for self-evaluating art products in relationship to oneself.	9. To develop criteria for self-evaluating art products in relationship to oneself AND TO HIS ENVIRONMENT.	9. To develop criteria for self-evaluating art products in relationship to oneself and to his environment.	9. To develop criteria for self-evaluating art products in relationship to oneself and to his environment.
0. To aid the child in relating himself to the classroom peer group within the framework of a group situation IN A VARIETY OF GROUP PROJECTS.	10. To aid the child in relating himself to the classroom peer group within the framework of a group situation in a variety of group projects.	10. To aid the child in relating himself to the classroom peer group within the framework of a group situation in a variety of group projects.	10. To aid the child in relating himself to the classroom peer group within the framework of a group situation in a variety of group projects.
1. To help child see the relationship of art to daily living.	11. To help child see the relationship of art to daily living.	11. To help child see the relationship of art to daily living.	11. To help child see the relationship of art to daily living.

ELEMENTARY SCOPE AND SEQUENCE OF

KINDERGARTEN	GRADE ONE	GRADE TWO	GRADE THREE
"An Awareness of Art"	**"The Field of Art"**	**"The Art Product, Heritage, History"**	**"The Artist"**
1. DEVELOP AN AWARENESS OF ART AND ITS PLACE IN MAN'S HISTORY. 2. TO DEVELOP AN AWARENESS OF THE RELATIONSHIP OF ART TO DAILY LIFE. 3. DEVELOP DEGREE OF EMPATHY WITH ARTISTS BY EXPOSURE TO: MEDIAS TOOLS ART PRODUCTS ARTISTS 4. BEGIN TO DEVELOP A SET OF PERSONAL CRITERIA OF ACCEPTANCE OF AN ART PRODUCT.	1. TO EXTEND THE CONCEPT OF "ART" AND ITS PLACE IN HISTORICAL DEVELOPMENT OF MAN. 2. To develop an awareness of the relationship of art to daily life. 3. TO DEVELOP UNDERSTANDING OF THE ARTIST AND HIS METHODS OF PROBLEM SOLVING. 4. TO DEVELOP AN AWARENESS OF THE MANY FACETS OF "THE FIELD OF ART" HISTORICAL ORIGIN OF ARTIST PRIMITIVE PRESENT TYPES OF ARTISTS PAINTERS SCULPTORS ARCHITECTS ARTIST'S TRAINING SELF-TAUGHT STUDY FROM GREAT TEACHERS ART SCHOOLS WHERE ARTIST WORKS HOME SPECIAL SCHOOLS FROM NATURE ARTISTS MATERIALS AND TOOLS/SCHOOL ART MEDIA AND TOOLS: FINGER PAINTING TEMPERA CRAYON CLAY MODELING PAPER PRINTING CHALK CONSTRUCTIONS YARN & STRING PAPIER MACHE SCRAPS WOOD LEATHER PRINTING ARTIST'S DISPLAY AREAS HOMES MUSEUMS GALLERIES 5. Begin to develop a set of personal criteria of acceptance of an art product.	1. To extend concept of "art" and its place in historical development of man. 2. To develop an awareness of the relationship of art to daily life. 3. TO DEVELOP AN AWARENESS OF THE DIFFERENT FORMS OF ARTISTIC EXPRESSION — THEIR FUNCTIONAL AND AESTHETIC VALUES. PAINTING SCULPTURE ARCHITECTURE DECORATIVE ARTS WEAVING TAPESTRIES FABRICS RUG MAKING BASKETRY POTTERY ILLUMINATIONS FURNITURE 4. TO INTRODUCE THE AWARENESS OF THESE ART FORMS IN A HISTORICAL PERSPECTIVE INCLUDING: ANCIENT ART MODERN ART 5. CONTINUE to develop a set of personal criteria of acceptance of art products.	1. To develop concept of "art" its place in historical develop of man. 2. To develop an awareness o relationship of art to daily 3. TO INTRODUCE ARTISTS PEOPLE REPRESENTING JOR ART FORMS. PAINTERS BOTTICELLI LEONARDO DA VINCI VAN GOGH RYDER KLEE PICASSO SCULPTORS DONATELLO BUONARROTI HENRY MOORE ARCHITECTS BUONARROTI WRIGHT DECORATIVE ARTISTS Weaving and tapestry — RAPHAEL CELLINI Pottery and China — Illuminations — Anonym Furniture — HEPPLEW SILVER & GOLDSMITH REVERE CELLINI JEWELRY 4. TO INTRODUCE THE VAR SAMPLES AND STYLES ART EXPRESSION FROM CIFIC ARTISTS. 5. Continue the development of sonal criteria of acceptanc ARTISTS.

Capitals indicate concepts new to grade level.

EQUENCE OF APPRECIATION OBJECTIVES

GRADE THREE	GRADE FOUR	GRADE FIVE	GRADE SIX
"The Artist"	"The Field of Art"	"The Art Product, Heritage, History"	"The Artist"
To develop concept of "art" and its place in historical development of man. To develop an awareness of the relationship of art to daily life. TO INTRODUCE ARTISTS AS PEOPLE REPRESENTING MAJOR ART FORMS. PAINTERS BOTTICELLI LEONARDO DA VINCI VAN GOGH RYDER KLEE PICASSO SCULPTORS DONATELLO BUONARROTI HENRY MOORE ARCHITECTS BUONARROTI WRIGHT DECORATIVE ARTISTS Weaving and tapestry — RAPHAEL CELLINI Pottery and China — Illuminations — Anonymous Furniture -- HEPPLEWHITE SILVER & GOLDSMITHS REVERE CELLINI JEWELRY TO INTRODUCE THE VARIOUS SAMPLES AND STYLES OF ART EXPRESSION FROM SPECIFIC ARTISTS. Continue the development of personal criteria of acceptance of ARTISTS.	1. To extend concept of "art" and its place in historical development of man. 2. To develop an awareness of the relationship of art to daily life. 3. To develop understanding of the artist and his problems and methods of problem solving. 4. TO EXTEND the awareness of the many facets of the "field of art." Historical origin of artist Primitive Present Types of artist Painters Sculptures Architects Decorative Arts CRAFTSMEN Artist's training Self-taught Study from great teachers Art Schools Where artist works Home Special Schools Outdoors OFFICE (BUSINESS & INDUSTRIAL) DESIGN OFFICES Artist's materials and tools/ School Art media and tools: Finger Painting Tempera Crayon Clay Modeling Paper Printing Chalk Constructions Yarn & String Papier Mache Scraps Sawdust Plaster Paper Sculpture Water Color CHARCOAL Wood Metal Plastics Printing ARTIST'S SPECIAL TOOLS PAINTER SCULPTOR ARCHITECT WEAVER POTTER GLASS BLOWER SILVER SMITH DESIGNER Artist's display areas Homes Museums Galleries CHURCHES PUBLIC BUILDINGS LOCAL SHOWING 5. EXTENDING the development of personal criteria for the acceptance of the FIELD OF ART.	1. To extend the concept of the correlation of historical events and the development of art serving basic human needs. 2. To develop an awareness of the relationship of art to daily life. 3. To develop EXTENDED awareness of the forms of artistic expression, their functional and aesthetic values. Painting Sculpture Architecture Decorative Arts Weaving Pottery Illuminations Furniture Silver & Goldsmith 4. To EXTEND the awareness of additional Examples of artist's products, periods, schools, and styles in a historical perspective, including: Ancient Art Modern Art RENAISSANCE ART MEDIEVAL ART 5. Extending the development of personal criteria of acceptance of art products.	1. To extend the concept of the correlation of historical events and the development in the art of serving basic human needs. 2. To develop an awareness of the relationship of art to daily life. 3. TO ACQUAINT CHILDREN WITH ADDITIONAL ARTISTS AND THEIR STYLES REPRESENTING MAJOR ART PERIODS AND PRODUCTS. Painters GIOTTO BRUEGHEL REMBRANDT EL GRECO RENOIR GOYA LARKIN CEZANNE ROUAULT CASSATT CHAGALL MONDRAIAAN MUNCH WOOD ROOD Sculptors Buonarrotti CHIBERTI BARLACH RODIN LIPCHITZ BRANCUSI Architects Buonarrotti Wright GHIBERTI WREN YAMASAKI Decorative Arts Weaving and Tapestry Raphael MARTHA ERPS Pottery, China, Glassware HENRICH WILHELM STIEGEL Illuminations Furniture Hepplewhite DUNCAN PHYFE CHIPPENDALE Silver and Goldsmith Revere Cellini 4. Extending the development of personal criteria of acceptance of art products.

bloomington p

secondary school A

scope and seque

	basic activity areas			
	drawing	printmaking	painting	three dimension
grade 7	techniques - perspective - contour - volume - chiaroscuro media - pen - pencil - crayon - charcoal - brush	prints - negative - positive gadget monoprint glue string-stenciling newspaper lift	color theory - color wheel - tints - shades - complimentaries two dimensional design media - opaque chalk sketches - translucent crayons construction paper - transparent tissue tempera water color ink felt pens	additive - constructions balsa wood toothpick - assemblage mixed media design composition subtractive - plaster carving
grade 8	techniques - perspective - contour - gesture - volume - chiaroscuro	prints gadget 3m printmaker's tape linoleum wood cuts	color theory two dimensional design media - opaque chalk sketches - translucent crayons construction paper - transparent tissue tempera water color ink felt pens	clay - heads - animals - decorative assemblage - scrap wood
grade 9 ART I	techniques - perspective - contour - gesture - volume - chiaroscuro	prints string gadget wood cuts serigraphy	color theory two dimensional design media - opaque chalk sketches - translucent crayons construction paper - transparent tissue tempera water color ink felt pens	sculpture - clay - expressive - papier mache - plaster - pariscraft and others - sandstone - wire - soldering/scul metal - woodcarving - constructions - assemblage

omington public schools
ary school ART activity areas
and sequence grades 7-9

	related activity areas				
e dimension	appreciation ART history	commercial ART	ARTistic crafts	pottery	group projects
e ructions alsa wood oothpick ablage nixed media esign omposition tive r carving	ART history american scene	introduction to lettering (brush)	weaving stitchery	ceramic - introduction - application	display
ls tive age wood	ART history architecture sculpture	lettering layout design	tie dye batik suggestion: 3m and tempera basketweaving	clay - basic technique wedging firing glazing slab pinch coil - optional wheel emphasis on technique	display decoration
e expressive mache - pariscraft d others one oldering/sculp etal rving ctions lage	ART history paintings of the european ARTist	lettering - cartoon book - contempory cards - sayings	creative	handbuilt pots wedging firing glazing slab pinch coil - optional wheel emphasis on aesthetics of clay	display decoration stage ARTs

secondary school AR
scope and sequenc

	basic activity areas				
	drawing	printmaking	painting	three dimension	a A
grade 10 ART I	techniques - perspective - contour - gesture - volume - chiaroscuro	prints string gadget wood cuts serigraphy	color theory two dimensional design media - opaque chalk sketches - translucent crayons construction paper - transparent tissue tempera water color ink felt pens	sculpture - clay - expressive - papier mache - plaster - pariscraft and others - sandstone - wire - soldering/sculp metal - woodcarving - constructions - assemblage	ART painti euro
grade 10 ART II	techniques - perspective - contour - gesture - volume - chiaroscuro	prints woodcuts - reduction - multicolor	color theory - color wheel - tints - shades - complimentaries two dimensional design media - opaque chalk sketches - translucent crayons construction paper - transparent tissue tempera water color ink felt pens	broken form - clay armature - plaster sculp-metal - wire-solder wood reliefs - stained	ART mode conte indust consu interi
grade 11 ART III	techniques - perspective - contour - gesture - volume - chiaroscuro	prints etching - scratchboard silkscreen paper lithography	color theory two dimensional design media - opaque chalk sketches - translucent crayons construction paper - transparent tissue tempera water color ink felt pens	clay casting processes wood - logs - railroad ties optional - plastics liquid sheet (modern approaches)	ART local americ
grade 12 ART IV studio course	ART IV is a studio course designed to reflect the individua independent work is done under the guidance of the teach all of the areas identified in this scope and sequence. emp materials, technique, creative use, and completion of se				

econdary school ART activity areas

scope and sequence grades 10-12

	related activity areas				
ee dimension	appreciation ART history	commercial ART	ARTistic crafts	pottery	group projects
ure - expressive er mache ter - pariscraft and others Istone - soldering/sculp metal dcarving tructions mblage	ART history paintings of the european ARTist	lettering layout design lettering - cartoon book - contemporary cards - sayings	creative	handbuilt pots wedging firing glazing slab pinch coil - optional wheel emphasis on aesthetics of clay	display decoration stage ARTs
n form ure ter sculp-metal -solder reliefs ned	ART history modern contemporary industrial consumer interior design	consumer design interior design	crafts tie dye batik stitchery	advanced pottery	display
g processes road ties al tics quid heet dern approaches)	ART history local american	newspaper layout	jewelry - copper enameling - ARTmetal - cast	advanced pottery	display

eflect the individual interest and talents of the student. the selection of projects for
idance of the teacher on an individual basis. project can be selected from any or
and sequence. emphasis is on individual growth and sophistication in selection of
d completion of selected projects.

junior high school course of study

grade seven

seventh grade ART is a required course and is designed as a semester offering. since children are born imaginative, prolific, and communicative in their own spontaneous way, we feel the seventh grade program should match the child. the course is to be exploratory, investigative and stimulating.

project areas covered throughout the year

I. color study

- primary colors
- intermediate colors
- secondary colors
- warm colors
- cool colors
- tints
- shades

II. lettering

- gothic lettering
- gothic numerals

III. design

- geometric
- line
- shape
- texture
- form
- space
- principles

IV. figure and freehand drawing

- contour
- gesture
- solidity
- perspective

grade eight

eighth grade ART is an elective course and is designed as a semester offering. all eighth grade students now having one semester behind them in ART fundamentals are introduced to artictic crafts. as ART educators, we feel these young people should now develop skills in manipulation and construction. through these skills we hope to create a change from unconscious creation to a more intense awareness.

project areas covered throughout the year

I. artistic crafts
  - mosaics
  - basketry
  - weaving
  - stitchery

II. ceramics
  - slab
  - coil
  - potters wheel
  - decoration

III. sculpture
  - wood
  - clay
  - soap
  - paper

IV. construction
  - paper
  - wood

V. ART appreciation

VI. painting
  - transparent
  - opaque

VII. construction and manipulation

grade nine or ART I

ninth grade ART is an elective course and is designed as a full year offering. at the ninth grade age level, the students change both physically and emotionally, becoming more adult. the students become more realistic and now want to know the direction in which their work is going. we, as ART instructors, now feel all activities must be challenging, educational, and alive with interest. it is also felt that ninth grade ART is an experimental course in which students are further developing learned techniques and are emotionally reacting to their surroundings.

project areas covered throughout the year

I. visual design
II. drawing
III. painting
IV. artistic crafts
V. printmaking
VI. manipulation and construction
VII. lettering
VIII. ART appreciation
IX. sculpture
X. ceramics
XI. individual projects

grade nine workshop

ninth grade workshop is an elective course and meets daily for one semester. the student selecting this course is interested in art as a constructive hobby. assignments will cover painting, sculpture, and drawing.

senior high school course of study

ART I 101

this introductory course is designed as a studio workshop in which the student interested in ART may explore a vast range of materials including ink, pencil, watercolors, tempera, crayon, plaster, pastels, charcoal, wire, clay, and wood. the student will experiment with these materials in the area of design, drawing, painting, printmaking, sculpture, ceramics, commercial art, and lettering. emphasis will be placed on developing and understanding creative expression, ART vocabulary, methods, techniques and basic ART fundamentals.

project areas covered throughout the year

crayon design

tissue paper designs

pencil sketching

value drawing

composition problems

texture emphasis

monochromatic color painting

drawing the human face

drawing the human figure
- crayon
- ink
- matchstick tempera

woodcuts   lino-cuts

gadget prints

commercial ART unit
- lettering types and styles
- trademarks
- record covers
- contemporary cards
- composition using motto or quote all letters from magazine parts

symphony competition

ceramic sculpture

painting unit liquitex

water color and mixed media

ceramic pottery

AET history and appreciation

ART II 102

the student will begin a general study of ART history that will be used as a background for studio projects and as a means of developing aesthetic judgment. the projects will involve more advanced techniques. students will be expected to work on assignments outside of class. this would include sketchbooks, criticisms, research papers, visits to ART exhibits and group discussions.

project areas covered throughout the year

drawing: perspective

nicolaides approach

light and shadow

color

matching value of newspaper picture with color tissue

composition

mosaic sculpture

painted wood relief

prints mono, glue, woodcut

painting: liquitex

a small object greatly enlarged
oils

sculpture, cubism head

collage and sketch from collage

water color advanced techniques

ART III

a more advanced course where students go into depth study on various media. the more sophisticated projects will be introduced, prerequisite: satisfactory completion of ART I and ART II.

project areas covered throughout the year

- drawing: perspective
  - contour, gesture, volume, light and shadow, chiaroscuro
- printmaking
  - etching(scratchboard)
  - silkscreen
  - paper lithography
- color theory - design projects
- clay - pottery and sculpture
- casting - postwax, plaster
- wood carving
- painting techniques
- overview of ART
  - with emphasis on local and American
- commercial ART
  - newspaper layout
- jewelry
  - copper enameling
  - wire
  - artmetal
  - cast
  - sterling

ART IV

this advanced course is for the student who is considering a career in the ART field. the student will have an opportunity to work on individual or group projects. more time will be spent on each project to allow for intensive study.

included in the course will be an ART history unit, a study of the job opportunities in ART and a required term paper. prerequisite: satisfactory completion of ART III.

project areas covered throughout the year

conducted as a studio course where students plan to work in a certain area or areas for a nine week period. a quarterly evaluation is done by students evaluating learned techniques, principles, etc.

periodic discussions on ART related problems of past and present.

required term paper.

crafts

this course, open to sophomores and juniors, is designed to interest students in a constructive hobby. leather, plastics, jewelry, metal, printing, ceramics, wood engraving, weaving, and stitchery are some of the fields that will be explored. an appreciation of fine craftmanship and good design will be aims of the course.

prerequisite: sophomore or junior

project areas covered throughout the year

design project with elliptical form

wood carving

3-D construction

printmaking

mosaics

chip carving or relief carving

2-D design

ceramics

leathercraft

jewelry with sculp metal and wood

lettering

papier mache'

painting

sculpture (plastic block)

ceramic trivit

wire jewelry

copper enameling

clay sculpture

modular courses

selected course offerings identified as modules may be developed to meet pupil interest at the discretion of the local building personnel. some examples of module offerings include:

ART display 107

introduction and practice in creating attractive displays for the display cases and bulletin boards in the high school and possibly in the classrooms. includes lettering, design, card writing and students may advance at own speed.

ART workshop 108

a course permitting students to work in ART mediums of their choice. independent or group work is offered in these fields: ceramics, sculpture, drawing, water colors, oil, painting encaustics, scratchboard, etc.

crafts workshop 109

a course permitting experienced ART students to work in ART on media they select. independent or group work in ceramics, sculpture, jewelry making, etching and handicrafts.

ceramics 110

an advanced class for students that would feel a need to express themselves with their hands. emphasis will be on creating useful forms for the home and developing skill in various techniques.

painting 111

for students that have a need to express their creativity in watercolor or oil. this course will try to establish skills that may be used in later pursuing a hobby.

ART, 2-D techniques 115

a course with the emphasis on drawing (pencil, paste, charcoal, etc.) watercolor painting, tempera painting, and collage. a student should have ART ability in this class.

ART, 3-D techniques 116

the emphasis in this class will be on sculpture including work in clay, wood, plaster, saltblock, foam glass, sculpmetal and wire. ART ability desired.

commercial ART techniques

the emphasis on developing skills in commercial ART techniques such as layout, lettering, illustration, display, and giving the student basic understanding in ART careers.

stage design

for students that are involved with theater productions and various decorations, stage settings and properties that complement the school productions.

ART workshop

similar to ART I except that more attention is given to individual instruction and in-depth study will be taken with some students.

suggested lessons for grade 7

drawing
printmaking
painting
3-d
related

drawing

seventh grade
project: introduction to perspective

suggested lessons:

a group of rectangular prisms of various proportions and positions in two-point perspective shaded.

a simplified downtown street with rectangular buildings in one-point perspective.

a gable house with fence, sidewalk, and chimney.

objectives:

to introduce students to the "point of view" involved in mechanical perspective.

to teach them to look for vanishing points and horizon (eye level) around them all of the time.

to show how these principles can be applied in more complex drawings.

study: Maurice Utrillo

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materials:	tools:
12 x 18 white drawing paper	18" ruler pencil eraser

---

evaluation:

care in placing and using of horizon and vanishing points.

points must be used correctly.

shading must be consistent.

good pictorial quality.

printing

seventh grade
project: everyday objects
suggested lessons: all types of design - objective, non-objective

objectives:

study the principles of reproducing images

study design aspects - patterns, repetition, etc.

knowledge of color - harmony, combinations, etc.

---

materials:

- paper
  - grey bogus
  - oatmeal paper
  - ART fabric
- miscellaneous
  - vegetables
  - spools
  - string
  - pie tin
  - combs
  - sponge
  - squares of cardboard
  - brayer
- paint
  - tempera
  - ink

---

evaluation:

clarification of reproductions

continuity of design and knowledge of design

neatness and cleanliness of the print

painting (color)

seventh, eighth, ninth grade or ART I
project: paper mosaics and torn paper
suggested lesson: birds, fish, animals, people, landscape, flowers

objectives:

student learns to manipulate and select color with particular emphasis on shading.

provides experience in mosaic techniques.

provides experience in overall design qualities, basic shapes and forms.

provides experience with materials manipulation.

study: Vincent van Gogh.

---

materials:	tools:
gummed paper	scissors
construction paper	paper cutter
magazine ads	sponge
waterlox (torn paper)	
rubber cement	

---

evaluation:

how well student utilizes above objectives.

3-dimension

seventh grade

project: mobiles
suggested lessons: non-objective construction, animals, birds and fowl, mood or feeling

objectives:

to give student experience in working with 3-d form

to give experience in an additive approach to design

relating color to form and direction

study: David Smith

---

materials:

tongue depressors
balsa
reed
toothpicks
balsa sticks
duco cement
spray paint
construction paper

wire
paris craft
sculpmetal
nails
furnace cement
plaster
plastics
metal

tools:

saws
hammers
x-acto knives
sandpaper
pliers
vice

---

evaluation:

does the finished work express the mood or subject asked for?

does the structure balance and have stability?

related arts

seventh grade
projects: weaving
suggested lessons: scarf, table mats, necktie material, bags, pouches.

objectives:

develop a knowledge and appreciation for textile heritage.

develop an appreciation of various fabrics as to texture, color, and pattern.

develop weaving into a valuable craft in hobby or livelihood.

develop an appreciation of hand work in comparison to the complication of the factory machine.

understand form, development and use of fabrics.

study: Odberg - R. Abell

---

materials:

cloth (odds & ends)
cotton warp
embroidery thread
paper
felt
raffia

tools:

cardboard, wood frames
simple looms

---

evaluation:

student selection of - color
- textural contrasts and patterns
- combining of materials.

knowledge of craft process and terminology.

craftsmanship and function of product.

related areas
commercial art display

seventh grade

project: simple poster

suggested lessons:

make a 12 x 18 poster for one of the school departments.

make a sign for his own bedroom door.

make a sign for a school function.

make a design for 24 sheet outdoor sign (soft drind ad).

objectives:

to learn the principles involved in developing a simple poster.

to make thumb-nail layout sketches.

to deliver a message simply and to the point.

to work from a group of roughs to one finished piece.

study: Henri de Toulouse Lautrec

---

materials:	tools:
tempera paint colored paper, etc.	pencil ruler, etc.

---

evaluation:

instant attention getter?

does the message get across?

is the sum total pleasing?

quality and style of lettering?

suggested lessons for grade 8

drawing

printmaking

painting

3-d

related arts

grade eight
project: designing hand built pottery

suggested lessons: students study pots and pictures of pottery which use good slab or coil technique. then make pencil sketches of a great variety of original designs faithful to the characteristics of the technique preferred.

objectives:

correlate design with the nature of construction method.

work out an original design after studying work of other artists.

make a useful plan from which a real pot will be made.

---

materials:	visual aids:
sheet of drawing paper	coil and slab pots
pencil	slides and pictures
ruler	film no. 1167
eraser	coil, slabs and space

---

evaluation:

is the design faithful to the method?

is it original?

is it functional?

can it be constructed?

grade eight
project: printmaking

suggested lessons: a print or cards, poster and advertising layout, mythological themes possible.

objectives:

provide opportunity for student to gain some appreciation of the processes related to the fine arts such as woodcuts, lithographs, engravings, etc.

provide opportunity for student to gain knowledge of the printing processes used in so many of the things in which he comes in contact, such as printed fabrics, wallpapers, etc.

provide opportunity for student to become aware of the effect of composition on the success or failure of the prints as well as the use of repeated motifs.

study: John Larkin

---

materials:	tools:
water base ink rice paper wood or linoleum or gadgets	wood or linoleum gouges brayers

---

evaluation:

a written student evaluation - questions attached.

Name ______________________________

EVALUATION OF PRINTMAKING

1. Study the various lines in your print. Is there enough variety to make it an interesting and exciting piece of work?

2. Consider the over-all composition, does it fill the space adequately?

3. What have you done to improve your print since you took the 1st trial print?

4. List the varieties of printing techniques you attempted to give them added interest.

   a.
   b.
   c.
   d.
   e.

5. What is the theme or subject matter of your print?
   What did govern your selection - why did you choose what you did?

   *Is it completely original?
   *Taken from an artists drawing?
   *Taken from a photograph?

*6. What grade do you believe you have earned for this job?

7. What other additional printing method are you submitting?

grade eight

project: crayon engraving

suggested lessons: fireworks, fall leaves, insects, abstract designs, fish and sea plants, birds and fowl.

objectives:

provide opportunity for student to experiment with shapes and colors - noticing those that advance and retreat.

provide opportunity for student to work for color relationships that will give unity, balance and emphasis to the art product.

provide opportunity for student to work with original and imaginative modes of self-expression.

---

materials:	tools:
paper	crayon - wax
white paper 4080	black tempera mixed with liquid soap
grey bogus 12 x 18	paint brush
pebble board	nails
	razor blade - single edge
	tools for scratching

---

evaluation:

how well finished products fulfill above objectives.

3-dimensions

grade eight
project: mobiles

suggested lessons: students chose theme from nature (birds in flight, trees, etc.) or manipulate abstract forms for harmony in motion.

objectives:

an approach to the element of space in a design.

experience with a form of sculpture that moves.

work with balance relationships.

study: Alexander Calder.

---

materials:

cardboard
sheet metal
wire
thread
wood
plastic
glass
miscellaneous materials

tools:

pliers
metal shears
scissors
brushes
soldering iron--solder

---

evaluation:

is the mobile harmonious as a whole?

does the mobile appear to be moving or hanging?

the character of the movement -- what is it?

related arts

grade eight

project: crafts (ceramics)

suggested lessons: pinch pots, slab, coil pots, bowls, cups, plates, similar ceramic forms.

objectives:

to understand origin of pottery (purposes and uses)

to gain skill in handling clay in using various construction methods (wheel, hand, slab, coil)

to gain appreciation of what is good functional design.

skill in glazing and decorating techniques.

study: Bernard Leach - (english), W. McKinsey - (local)

---

materials:

clay
burlap
sponge
glaze
engobe

tools:

fettling knive
plaster bat
roller
various wire and wood tools
brush
kiln

---

evaluation:

does the art object fit its purpose?

how well are the parts organized?

does it have a pleasing shape?

does it look as if it is made of clay?

does the pot display good craftmanship?

related arts

grade eight

projects: ART design

suggested lessons: eighth grade 3-d design, sandcasting.

objectives:

develop sense of positive and negative objects in 3-d.

develop sense of a variety in texture.

---

materials:	tools:
box sand various objects for impressing into sand plaster (fast dry) wire and/or screen wood board	

---

evaluation:

did the student show a lot of originality in his design?

does it give the feeling of a piece dominated by only texture without a need for color or line?

suggested lessons for:

ninth grade and/or ART I

drawing

printmaking

painting

3-d

related arts

drawing
design

ninth grade or ART I
project: collage
suggested lesson: abstract design, animals, fish

objectives:

provide experience in composition involving variations in texture.

provide experience in relating materials with different surface qualities--light reflections, etc.

provide experience with materials involving varied visual-tactile response.

provide experience in relating, compositionally, unrelated surfaces and special dimension.

study: George Bracque.

---

materials:

tagboard
plaster board
mat board
cardboard
textured papers
duco cement
adhesive glue

tools:

scissors
paper cutter
saw
file
sandpaper
steel wool

---

evaluation:

which and how many of the above criterion have been met and to what degree?

printmaking

ART I or grade nine
project: wood block prints

suggested lessons: birds, animals, fish, landscapes, figures

objectives:

give student opportunity to acquaint self with tools of wood block printing.

develop ability to use environment as a resource for creative expression.

use design to re-create the visual and emotional impact of an experience.

may use as an opportunity to utilize adolescent day-dreaming and flight-of-fancy as stimuli for personal expression.

study: John Larkin

---

materials:

wood
  soft pine
  plywood
  hardwoods
paper
  rice paper
  3-m ART fabric
  grey bogus
  pastel paper
paint
  tempera - diluted
  water color - tube
  block printing inks - (water soluble)

tools:

linoleum cutters of all types
wood carving tools of all types
brayers
glass
jar lids

---

evaluation:

how well finished product fulfills above objectives.

printmaking

ART I or grade nine
project: serigraphy

suggested lessons: landscape, seascape, cityscape, circus theme, fair, carnival, people (singly or in crowd), abstract, non-objective.

objective:

develop appreciation for the materials, equipment involved.

develop craftsmanship qualities in the work.

understand the type of subject matter to suit the medium.

study: Roy Lichtenstein - Rauschenberg.

---

materials:	tools:
silk, organdy, nylon	wooden frame
tape (masking, adhesive)	squeegee
varnish	stencil knives
glue	
tusch	
profilm	
silk screen ink (water soluable and textile)	
bristol (or cardboard type paper)	

---

evaluation:

does the product show sound craftsmanship and faithful use of materials?

is the subject matter suited to the medium?

painting

ART I or ninth grade
project: painting

suggested lessons: exploratory experiments with the media-subject matter unlimited.

objective:

provide the teacher with an opportunity to discover levels of artistic development in individual pupils.

provide frequent periods of self-evaluation so that the pupil is led to think and build on learnings as his work progresses.

provide opportunities to develop greater ability to solve problems of color and design in a personal way.

provide an opportunity to develop an understanding of the power of color as a factor of design.

Study: Rembrandt, other artist of own choosing.

---

materials:	tools:
liquitex	brushes masonite or canvas board

---

evaluation:

if slides were used to introduce the unit, it might prove beneficial when evaluating the final product to look for the expressive qualities, objectives to be achieved etc. of their work - then take another look at the slides - then once again look at student work.

painting

ART I or ninth grade
project: watercolors
suggested lessons: landscape, seascape figures, portraits.

objectives:

provide experience with an art media which demands the student observe carefully.

provide experience with transparent technique.

application of color theory.

experience with watercolors on textured papers.

study: John Marin, W. Homer, E. O'Hara, A. Wyeth

---

materials:	tools:
watercolor paper	brushes - all sizes
art fabric	
rice paper	
paint - box watercolors tube watercolors	

---

evaluation:

how above objectives are met.

two and three dimensional design

ART I or ninth grade
project: two and three dimensional design

suggested lessons: paper, wood - wire - clay - cloth - or plaster sculpture - theme, student's choice.

objectives:

to develop resourcefulness through experimental manipulation of various materials.

to develop discrimination in the selection and use of colors, texture, surfaces and quantities of materials.

to develop freedom and imagination in using and combining two and three dimensional materials.

to develop more inventiveness in devising ways of construction.

study: Persner.

---

materials:

papers, colored, textured etc.
balsa wood
wire
cloth
metal
clay
plaster

tools:

---

evaluation:

which combination of textures and colors do you find especially attractive?

can you point out some examples of color movement which give a feeling of rhythm, balance, and unity to the design?

where have colors, textures, and shapes been thoughtfully contrasted?

in what ways did your previous painting or drawing experiences help you design in material?

related areas

ART I or ninth grade

project: papier mache

suggested lessons: animals, puppets, non-objective three-dimensional objects, masks

objectives:

provide experience with materials manipulation

provide experience with three-dimensional materials

provide experience in problem-solving, involving basic shape, form and color

provide experience in chosing decorative materials that will further the mood of the final art product

provide experience in creating an end product which can enhance other related areas, such as dramatizations

study: african, indian masks

---

materials:

- paper
  - newspaper
  - paper toweling
- masking tape
- wheat paste
- waterlox
- shellac
- turpentine
- adhesive glue
- paint
  - tempera
  - spray paint
- decoration materials
  - buttons
  - felt
  - yarn, etc.

tools:

- wire
- scissors
- varnish brush
- large paint brush

---

evaluation:

how product meets above objectives

related areas

ART I or ninth grade
project: ceramic sculpture
suggested lessons: abstract forms, expressing a mood or feeling or idea (conceptual approach).

objectives:

provides pupils the opportunity for experimenting and learning more about line, form, and texture in three dimensional design.

provides an emotional release and pleasure in creating three dimensional forms.

induce an active interest in various types of sculptural expression of the past and present.

study: J. Lipchitz, H. Moore.

materials:	tools:
clay	clay tools turning wheels kiln for firing

evaluation:

have the students answer teacher, prepare questions and submit these along with the finished product. Questions such as the following will help pupils evaluate their work:

is your piece a solid, unified piece of sculpture?

does it illustrate the required topic?

grade it! base your conclusion on: solid form, original subject matter, amount of time and energy exerted.

are you satisfied that this is the best job you could have done?

2 OF 5

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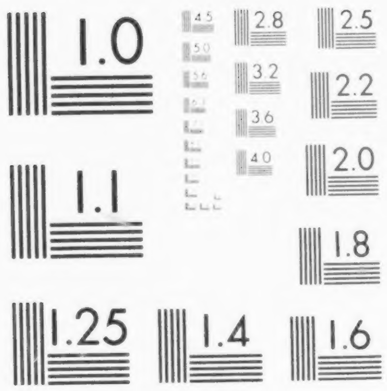
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1.4
1.6

MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

suggested lessons for ART II

drawing

painting

printmaking

3-d

related areas

ART II
project: figure drawing

suggested lessons: using "smudges" of powdered tempera and line drawing together to do gesture and bulk drawing.

objectives:

to learn to see a whole figure at one time and be able to draw it (gesture).

to be able to see and draw correctly relationships between parts of the body.

to use line along with the tempera smudging to suggest bulk.

study: Dufy--Degas--Matisse--Michaelangelo

---

materials:	tools:
powdered tempera (wrapped in small bundles, tied up with rubber bands.) drawing paper drawing tool (charcoal, chalk)	

---

evaluation:

accuracy of proportions.

success in showing bulk.

painting

ART II
project: oil painting

suggested lessons: student may explore any technique desired

objectives:

to increase the power to recall and select dramatic aspects of a remembered experience

to develop an understanding and applicable knowledge of the medium

to learn more about the use of color to create a forceful expression of an idea

to further develop the ability to observe and record things that happen every day

study: michelangelo

---

materials:	tools:
paper canvas	palette
masonite boards	brushes
canvas	palette knives
mat board	
oil cloth	
oil paints	
turpentine	
damar picture varnish	

---

evaluation:

which paintings clearly express a dramatic moment?

which paintings show an interesting organization of form and color?

which paintings are most successful in establishing relative proportions between objects?

which paintings make use of unusual viewpoint, and convey a strong visual impression?

where does color best create a feeling of form and space?

printmaking

ART II

project: reduction woodcut

suggested lesson: research sketch in color

objectives:

establish color in a printing process

study color in a printing process

advancement in the woodcut printing process

study: Munch, Rotloff, Meyers

---

materials:	tools:
white sugar pine (1/2" to 3/4" - soft)	wood cutting tools
india ink	nails
shellac	brayer
tape	
ink	

---

evaluation:

integration of subject matter with technique

accuracy of reproduction and registration

proficiency of color overlay

neatness and cleanliness

printing

ART II

project: lesson with tissue paper learning color value

suggested lessons: abstract design--christmas card, posters seascapes, landscapes, still life.

objectives:

to see value in color.

to see color as something making forms and not necessarily being a descriptive agent.

to explore a tissue paper technique.

study: Pablo Picasso.

---

materials:	tools:
newspaper picture	pen
tissue paper	brushes
polymer medium	
ink	

---

evaluation:

how closely the color areas, applied in patches, match the value of the black and white newspaper pictures.

how good the colors chosen work together.

how interesting the line work (ink) is--usually it is more interesting if the lines go inside or outside of the color area.

3-dimensions

ART II
project: painted or color stained wood relief

suggested lessons: a person, abstract design, landscape, seascape, still life.

objectives:

to explore a new technique which requires making decision in the area of how to best use one material (wood) when combined with another medium (painting or color staining).

to learn good craftsmanship and care of tools.

to try to find a unique technique which may involve a carving or tooling method or a compositional device or an unusual color scheme, etc.

study: related arts (sculpture, bas relief)

---

materials:	tools:
white pine boards	carving tools
wood stain or oil paints	sharpening stone
brushes and rags	

---

evaluation:

total effectiveness of finished piece (how carving and painting make a unified, strong statement).

wood used as wood, not any other relief medium.

paint or stain working with original "woody" statement.

ART II
project: ceramics

suggested lessons: crafts

objectives:

to understand heritage and purpose of pottery

to gain skill in handling clay in using various construction methods (wheel, hand, slab, coil)

to gain appreciation in what is good functional design.

to gain skill in glazing and decorating techniques.

study: Christian Schmidt

---

materials:	tools:
clay	
fetling knive	
plaster bat	
burlap	
roller	
various wire and wood tools	
sponge	
glaze	
engobe	
brush	
kiln	

---

evaluation:

does the pot fit its purpose?

how well are the parts organized?

does it have a pleasing shape?

does it look as if it is made of clay?

does the pot display good craftsmanship?

suggested lessons for ART III

drawing

painting

printmaking

3-d

related areas

drawing

ART III
project: scratch board

suggested lessons: illustrations, portraits, advertising layout, landscape, still life.

objectives:

to become acquainted with another medium

to find out how it is used in advertising

to find out how it is used for illustration

to become familiar with how it could be used for some other purpose

to become familiar with new techniques

study: Francis Lee Jacques

---

materials:	tools:
scratchboard (a specially prepared board, one side of which has a clay coating)	any sharp instrument for scratching
india ink (colors may be used, preferably darker colors)	pins
	x-acto knives
	pens
	gravers (wood engraving)

---

evaluation:

which design fulfills the requirements of a good design?

is there one which has employed all the elements to its greatest possibilities?

how could this knowledge be useful to you?

did you find a unique way in which to use this medium?

which of the large white areas are the best? why?

are there any smudged areas? what might have caused these?

what do you feel you have accomplished by working in this medium, and with these tools?

painting

ART III

project: liquitex painting

suggested lesson: an enlargement of something small.

objectives:

if the student has never stretched a canvas before, it would be to learn how to prepare a canvas.

to be forced to see the abstract elements in a painting by enlarging something so much that you no longer recognize it, but see only form, color, etc.

to see the value of using background as a compositional device.

to enlarge horizons for areas of inspiration.

study: Georgia O'Keefe.

---

materials:	tools:
liquitex	brushes
medium	pallettes
modeling paste	pallette knives
canvas	
masonite	

---

evaluation:

success as an art form (color, composition, interest, unity, variety, etc.)

printmaking

ART III

project: paper lithography

suggested lessons:

composition of human beings, landscapes, faces of people.

abstract composition that will lend to black composition.

objectives:

develop appreciation for the materials, equipment involved.

develop craftsmanship qualities in the work.

understand the type of subject matter to suit the medium.

study: Henri De Toulouse-Lautrec

---

materials:

plate solution (desensitizing agent)
litho sketch plates (drawing surface)
gum solution (plate protector)
printer's ink
liquid tousche
printing paper

tools:

litho pencils and crayons
litho swabs
brayer
printing press (wringer,etc.)

---

evaluation: (see printing objectives)

two and/or three dimensional design

ART III

project: laminated tissue paper

suggested lessons: non-objective design, abstract, landscapes, seascapes

objectives:

provide experience with color mixing, bleeding of colors

utilize transparent quality causing appearance of depth

provide opportunity to discover method to successfully emphasize the important part of the picture.

study: Villion

materials:	tools:
paper	scissors
pebble board	large flat brushes
4080 drawing paper	sta-flo laundry starch
good grade tissue paper	

evaluation:

is the material used in such a manner as is suitable to its specific characteristics?

is over-all design quality original?

do the over-lapping shapes suggest distance?

is there a point of interest?

related areas

ART III
project: crafts(copper enameling)

suggested lessons: jewelry, ash tray, small bowls, enameled wind chimes, minature paintings.

objectives:

to gain skill in using various materials.

to gain insight into an interesting and useful hobby.

to learn to use proper color combinations and elements of good design.

study: Shirley Hanson, M. Christenson (local artists)

---

materials:	tools:
copper shapes	small brush
flux or gum solution	enameling kiln
file	
sandpaper	
findings	
duco cement	
steel wool	
enamels	
tin or asbestos	

---

evaluation:

have the finished works expressed original ideas and beauty?

do they have a sense of fine workmanship with careful attention to details - are they functional?

which show especially good taste in combining materials?

suggested lessons for ART IV

painting

printmaking

related areas

ART IV

project: encaustic painting
(only two can work on encaustic at one time, so this would have to be worked in during a time when other students can work on something else).

suggested lessons: still life, landscape, seascape, in abstract impressionistic, realistic styles.

objectives:

to explore the possibilities of encaustic (particularly those peculiar to the medium).

to do a well-worn subject in different media which will almost force the student to develop a new technique.

to again work with the elements of design, learning how to use color, texture, form, etc.

to be careful - encaustic is dangerous unless done by responsible student.

study: Karl Zerbe

---

materials:	tools:
1/8" masonite board	palette knives, brushes
muffin pans, cake pans	hot plate - with controls
beeswax and linseed oil 10-1 ratio	
powdered tempera (instant), or	
color crayons	

---

evaluation:

how well the technique fits the media (wax) - honesty of material.

how successful as an art form.

ART IV

project: studio projects (individual study, limited to 9 weeks)

suggested lessons: lone and term projects - students choice.

objectives:

to work extensively in an area (sculpture, painting, etc.) for an extended period of time.

to learn to work in an situation which is basically self-directed and motivated.

study: artists related to students interest.

---

materials: tools:

appropriate to the area of concentration.

---

evaluation:

amount of work and quality of work.

related areas

ART IV
project: research paper (6 weeks)

suggested lessons: student chooses to do research on a special technique, period of art, or art criticism.

objectives:

to get information in an area that would help them in a studio project.

to increase understanding of ART through research (research of a technique, period of ART, or ART criticism).

to organize information logically and do one visual illustration.

---

materials: tools:

magazines and books

---

evaluation:

the amount of and quality of information.

how well the illustration illustrates.

modules

module
project: stagecraft

suggested lessons: design a backdrop for a stage setting

objectives:

design a backdrop for a student production.

relate work to subject of production.

study: Robert Indiana

---

materials:	tools:
canvas	brushes
paper	ladder
masonite	paint roller
props	
paint	
colored lights	

---

evaluation:

does the backdrop add or detract from the stage setting?

is it kept from becoming too elaborate?

does it do well with the various lighting situations used during the production?

module
project: commercial ART - magazine layout

suggested lessons:

objectives:

design a layout for a specific magazine object

include in the layout an illustration, lettering, excerpt from story line

study: norman rockwell, john whitcomb, john clymer

---

materials:	tools:
tagboard	oil brush
colored ink	pen
tempera	pen point
	ruler
	pencil

---

evaluation:

does the illustration give the appearance of being attractive?

does it relate to the age level reading the magazine?

module
project: ceramics

suggested lessons:

objectives:

handling of clay in the slab form

developing sense of working in relief

develop texture understanding

develop skill in using engobes

---

materials:	tools:
clay	rolling pin
burlap	fetling knives
canvas	wedging board
kiln	
contact cement	
plywood or masonite	
grout	

---

evaluation:

does the finished work look like it was made of clay?

will it serve its purpose?

do the various forms harmonize?

crafts

crafts
project: texture imprints (the quality of a surface)

suggested lessons:

objectives:

to achieve knowledge of what texture is.

to note variety of texture

how texture can be applied to surface of projects.

---

materials:	tools:
clay plaster (fast dry) small box	

---

evaluation:

are the textures original?

do they show variety?

does the idea of texture and its use carry over into other projects?

crafts
project: batik

suggested lessons: table cloths, wall panel, cards, shirt, blouse, place mats.

objectives:

study an application of one of the oldest processes in textiles.

study color theory.

acquaint students in working with a reductive method.

study: textiles in local stores employing this technique.

---

materials:	tools:
cloth	brushes
wax	hot plate
dyes, inks	frames to stretch cloth on
	tjanting or wax applicator

---

evaluation:

quality of the design and its relationship to the material.

quality and degree of dye application.

degree of proficiency in the different techniques.

drawing

definition:	a rendering in line with any of the various drawing media
areas covered:	perspective contour gesture volume chiaroscuro (light and shadow)

discussion

drawing

drawing is the oldest type of written expression and is understood the world over. a work is an abstract symbol representing a thing or an idea, but a picture represents an object as it *is*. "one picture is worth a thousand words," said confucius. to understand the truth of this, try to tell in words how to build a footstool, or describe a sunset. you will find that you cannot accurately and completely describe in words how to make a simple screw or express a basic human sentiment, however, no object is so complicated that it cannot be drawn.

how many times have you heard someone say, when words have failed, "oh, i guess i'll have to draw him a picture." if a person has good ideas but no effective way of expressing them to other people, the ideas are apt to get nowhere.

this sectionwill give the basic understanding of the language of drawing.

one of the most important effects of the quality of suppleness and pliability possessed by all the great painters was the freedom allowed the artist in his drawing. unhindered by the difficulties of working with an inadequate medium, his brush could flow as his mind and eye and knowledge directed. without the distractions that are always caused by technical limitations, he was free to give his entire attention to the expression of his ideas and the exercise of his abilities. the supreme examples of this ease of execution are to be seen in the great masters of the sixteenth and seventeenth centuries, when the understanding of the human form together with the skill to express it, reached their highest development at the same time that the technical means for such expression had been perfected.

it might be of value to examine briefly certain aspects of the subject of drawing, especially those relating to the natural facts with which drawing, as an ART, has to deal. in order to master this ART, the draughtsman must be possessed not only of skill, coupled with a sound knowledge, but he must also have an understanding of what drawing really means. to begin with, he must take note of some of the elementary principles of the visual aspect of nature:

first, that an object in space presents three dimensions-height, breadth and depth.

second, that the various properties of an object are modified by its position in space.

third, that the movement of lines and planes towards a vanising point constitutes linear perspective.

fourth, that the gradation of colors and tones or values, in relation to distance, constitutes aerial perspective.

fifth, that without the lights and shadows which modify its own colors, an object would make no appearance to the eye.

details and techniques

drawing discussion:

drawing skills are taught continually, in correlation with all the art projects.

painting, printmaking, as well as the three dimensional and related craft areas encompass a need for developed skills of a combined visual and kinesthetic nature.

the process is one of learning to "see", and then transferring that mental image to one's materials or media; this is accomplished in such a manner as to utilize the design elements that are studied throughout the year.

printmaking

definition: printmaking is a process whereby ink is transferred from an object or a surface to paper. the resulting print may be repeatedly reproduced with a great degree of consistency.

lithography and the techniques of planographic printing

preparation of the stone

reduction woodcut
  - materials
  - process
  - printing

lithograph
  - principles
  - process

lithography and the techniques of planographic printing

the antagonism between grease and water is a phenomenon which will be familiar to everyone; but the examples we come across in everyday life suggest something accidental and lacking in precision. if water is sprayed onto a greasy surface, the drops remain unequal in size and their arrangement there is quite random. the possibility of using this phenomenon in a printing process which would allow a sharp dividing line to be made between the printing and non-printing surfaces is not immediately apparent, and for this reason it is not surprising that planographic printing was not invented until long after relief and intaglio printing. it was Alois Senefelder of bohemia who made the key discovery in 1797, when he was looking for a means of reproducing musical scores. in the following years he developed all the important lithographic techniques.

although lithography was discovered in germany, it first attracted real attention in france. when Senefelder made his discovery, the revolution was beginning in france; men were seeking to emancipate themselves from the existing order. lithography with its spontaneous and versatile range of expression was more congenial to the new outlook than the strict techniques of copperplate engraving. it is certainly no coincidence that important dicoveries in the field of printing have always been made during times of great spiritual and intellectual upheaval. it is unlikely that the reformation could have spread in germany, without the simultaneous invention of printing by Gutenberg. the reformation needed a means of disseminating the word in its precisely fixed written form. that was the historical necessity behind letterpress printing.

the new spirit pioneering its way in the french revolution also needed a medium in which to manifest itself visually for dissemination. Honore Daumier, the great draughtsman and political controversialist, used lithography as a means of reproducing his scarifying caricatures of current events. his innumerable lithographs made the process well known. since then many artists of note have availed themselves of lithography, and contributed to its continued development down to the present day.

preparation of the stone

the technique of lithography is based on a very finely porous limestone found in central germany. it is quarried and cut into square slabs between 2 1/2 and 4 inches in thickness. when frequent grinding has made the stone so thin that is can no longer stand the pressure exerted upon it in the press, two stones are cemented together. the colour of the stone varies from creamy yellow to yellow, grey brown or grey blue. the blue stones are the hardest and the most in demand. they are used for the finest work, especially for engravings. as far as possible only flawless stones are used for the purposes of fine ART. as lithography has been largely replaced today by offset printing for commercial reasons, good used stones can be obtained cheaply.

with used stones the first thing to do is to grind off the old picture. today siliconcarbide sands of various grain sizes are used as an abrasive. the stone is laid flat and then strewn with sand and well sprinkled with water.

grinding is done with a second handy-sized stone, picture against picture, the movements described being in the shape of figure eights and circles and to and fro. coarse sand (grain size 80 or 100) is used first to obtain the more powerful abrasive effect needed to remove the top greasy layer of stone. in the case of drawings in litho-ink and old lithographs generally, the grease has often penetrated rather deeply, especially in soft yellow stones. once the grease-containing layer has been removed, progressively finer grades of sand may be used. the slurry consisting of sand and chalk produced by the grinding operations is carefully washed off at intervals. a metal rule is applied from time to time to test whether the surface is uniformly flat. after treatment with a sand of about grain size 240, the stone is carefully polished smooth with a sealing-wax grinding stone and an alum solution, and then well dried. it is now ready for use for a litho pen drawing or a transfer. smooth stones are preferred for this purpose because the pen slides easily over the surface. for other techniques the stone must be grained or roughened. sand of a quality corresponding to the fineness of the grain desired (up to grain size 400) is strewn on the stone with some water and a sharp, even grain is formed in the stone by the rapid rotation of the graining disc (of glass). after being washed the stone is ready for a chalk lithograph, a litho-ink wash drawing, and for splattering or other techniques which will be described in detail in the various chapters. in each case, however, it is a question of using greasy substance, whether greasy lithographic crayon, greasy litho-ink or printing ink, to apply the image to the receptive surface of the stone. if the stone is then first washed with water and subsequently run over with a roller covered with printing ink, the greasy ink will be accepted only by the drawing, which is itself already greasy, whereas the other wet portions remain clean. planographic printing depends on this mutual repulsion of grease and water; the printing portions of the surface are neither raised as in relief printing nor recessed as in intalgio.

reduction woodcut

materials:

1. white sugar pine 1/2 to 3/4 inch/soft
2. knife set
3. india ink
4. shellac
5. nails
6. tape

process:

1. have research sketch in color
2. board should be 1 1/2 inch larger than the actual plate for register nails
3. cut 1/2 inch groove along top of plate
4. transfer sketch onto the plate in india ink or magic marker (reverse)
5. cover drawing with shellac to preserve it
6. cut out any white areas first
7. proceed to reduce plate until final print includes all colors desired
8. allow ink to dry between overlayed printing

printing:

1. tape the paper on register marks
2. run a series of about 6 to 10 points
3. allow paper to extend beyond plate size

lithograph

principles:

1. ink accepts grease
2. porous stone -- accepts grease and water
3. gum arabic -- meta gumate (non-printing area)
4. oleo margarate - printing surface
5. acid etch
    - tannic
    - nitric opens pores of stone to help gum penetrate
    - phosphoric makes for good surface

acid	resin	
	chalk	acid - chalk - soap - limestone
	crayon	(Rx makes drawing permanent)

resin slows down the acid penetration

process:

1. secure stone
2. match tape
3. chalk - light to heavy
4. resin - light to heavy
5. etch
    - ring out small sponge
    - apply acid 1 1/2 minutes
    - wipe off excess
6. apply gum arabic
7. smooth gum with soft rag
8. let gum dry and wipe out crayon with turp
9. apply lacquer to secure tannic etch
10. apply in areas and wipe off immediately
11. asphathum is rubbed over lacquer
12. clean the stone with water

painting

definition: a design or composition created by using a brush or tool and pigment

basic color theories
  - field of study concerned with color
  - basic color attributes
  - primary colors
  - basic principles relative to color
  - basic facts from physics of light
  - properties of light basic to color production
  - pigment and paint color systems
  - color mixtures in light and in pigments
  - subtractive color mixture -- light, pigments
  - paint pigments

brushes

the mural
  - definition
  - selecting the theme
  - organizing the class
  - technique
  - the materials used
  - process
  - evaluation

basic color theories

field of study concerned with color

physiologist	concerned with the way the eye receives the sensations of color
physicist	concerned with light phenomena
chemist	concerned with the chemical properties of natural and artificial materials used as pigments
psychologist	concerned with color sensation as perceived and interpreted by the mind or consciousness
psychophysicist	concerned with the relationship between light, considered as visual stimulus, and the purely visual reaction to light
artist	concerned with basic knowledge from all fields

> "the function of ART is the aesthetic organization of color sensation. but the power to organize color intelligently and effectively requires that the artist formulate a comprehensive, integrated concept based on an understanding of the physical, psychophysical, physiological, psychological, and aesthetic aspects of color. the artist must learn the ART of objective analysis -- that is, he must develop the detached, impersonal attitude of the scientist and the broad approach to ART which was exemplified by Leonardo da Vinci -- who was poet, philosopher, musician, architect, scientist, as well as artist."
>
> Maitland Graves in *color fundamentals*

basic color attributes

terminology acceptable to all fields

hue is the quality of sensation by which an observer is aware of different wave lengths. it is the *name* -- red, blue, green.

saturation is the attribute of sensation by which the observer is aware of differences in purity of any one dominant wave length. it means the *redness*, *greenness*, *blueness*. it means freedom from or degree of freedom from mixture with white.

brightness is the attribute of sensation by which an observer is aware of differences in luminosity. degrees of luminosity, like wattage in the light bulb, move up in brightness toward white, down toward black. also termed *lightness*.

primary colors

in pigments (chemistry)	red, yellow, blue
in light (physics)	red, green, blue
in vision (psychology)	red, yellow, green, blue

basic principles relative to color

1. all color is relative.
2. color is a human response. color is not inherent in the object itself.
3. without normal vision we do not have color.
   (normal eye structure and normal physiology of the eye)
4. normal stimulus for vision is light. without light there is no vision.
5. light is the vibratory disturbance of the ether within certain limits.

basic facts from physics of light

spectrum: red, orange, yellow, green, blue, indigo, violet
  visible spectrum -- range of wave lengths between approximately 6700 a.u. and 3300 a.u.
  angstrom unit (a.u.) is a measurement of light which corresponds to inches, yards, etc. in space measurement
  shorter than 3300 a.u. -- ultra violet, sunburn, x-ray, cosmic rays, etc.
  longer than 6700 a.u. -- infra red, heat, burns, (infra reds damage eyes but are good for heat lamps, radio waves)

light stimulus	human response	music
wave length	hue (red, blue, green)	pitch (middle c has 250 vibrations per second)
wave amplitude	brightness (nearness to white) (distance from black)	loud or soft
wave form	saturation (greeness, redness, blueness, etc.)	tone quality, timbre (orchestration -- different instruments have different vibrations, due to difference in overtones) (timbre is produced by fundamentals plus overtones)

properties of light basic to color production

reflection -- light must be relected to the eye for vision
absorption -- complete absorption of light equals black
refraction -- bending of wave lengths
diffraction - white light passed through grating
transmission some wave lengths absorbed, some transmitted

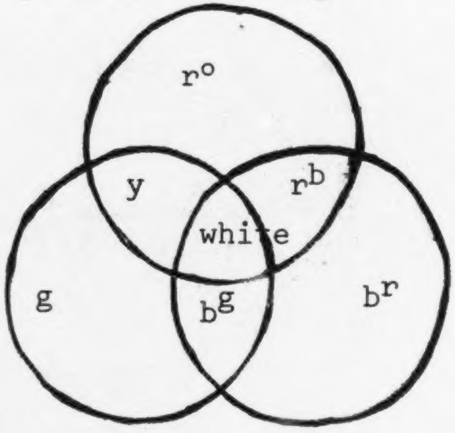
pigment and paint color systems

color attributes	prang system	munsell system	ostwald system
hue	hue	hue	hue
saturation	intensity	chroma	purity
brightness (lightness)	value	value	lightness-darkness

color mixtures in light and in pigments

additive color mixture - light

three colored lights	red	(orangish-red of r^o)	produce white light
	green		
	blue	(reddish-blue of b^r)	



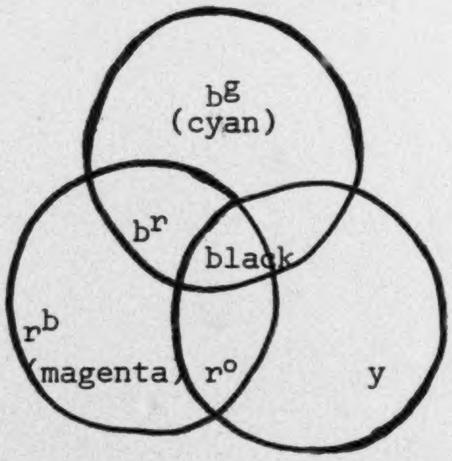
red and green together appear yellow
blue and green together appear greenish-blue
red and blue together appear bluish-red

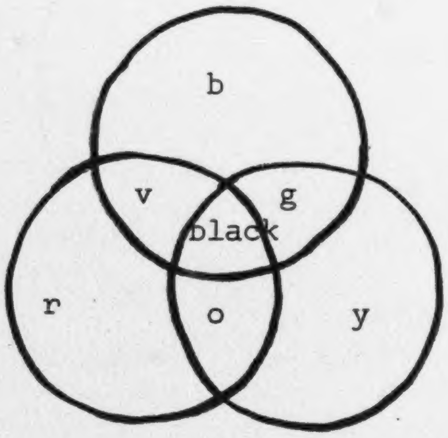
subtractive color mixture -- light, pigments

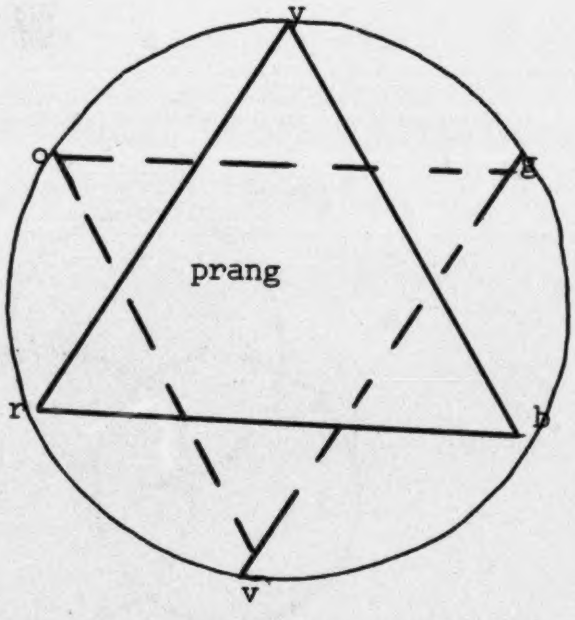
three discs	greenish-blue (cyan or b^g)	or minus red	produce black
	bluish-red (magenta or r^b)	or minus green	
	yellow	or minus blue	

r^b overlaps yellow	(r^b or minus green (y or minus blue	green absorbed by r^b) blue absorbed by yellow)	red
b^g overlaps yellow	(b^g or minus red (y or minus blue	red absorbed by b^g) blue absorbed by yellow)	green
b^g overlaps r^b	(b^g or minus red (r^b or minus green	red absorbed by b^g) green absorbed by r^b)	blue

light and pigments





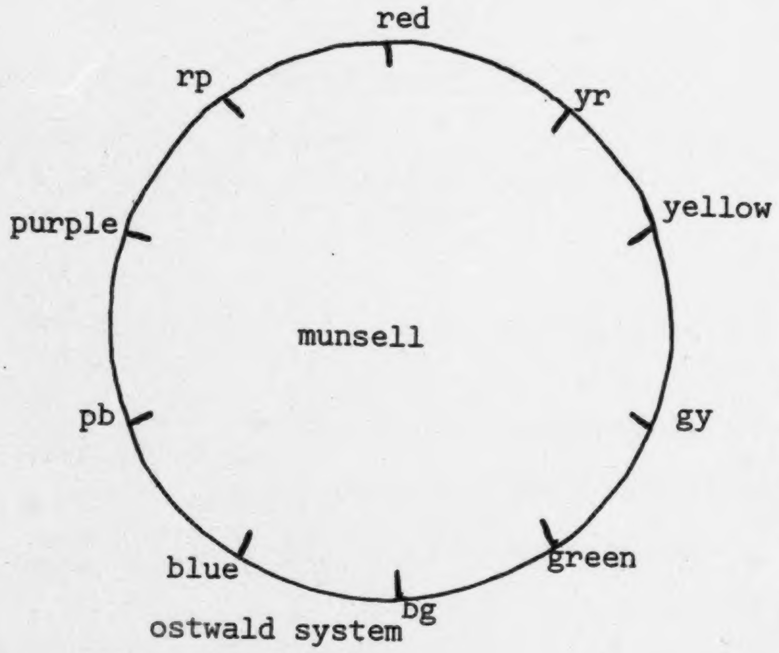

v
o
g
prang
r
b
v

prang system

primaries: red, yellow, blue
secondaries: orange, green, violet

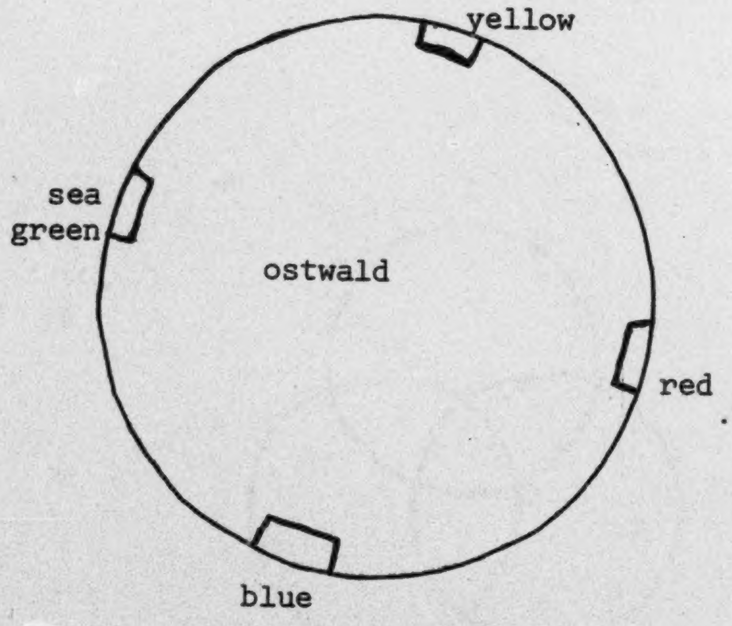
munsell system

five basic hues: adjacent hues
make intermediates


red
rp
yr
purple
yellow
munsell
pb
gy
blue
green
bg

ostwald system

4 distinct color sensations
utilizes visual complements
24 hues in the circle: 3 each of
yellow, orange, red, purple, blue,
turquoise, seagreen, leafgreen


yellow
sea
green
ostwald
red
blue

paint pigments

there are a number of different techniques used in painting, such as oil, tempera, water color, pastel, dresco, etc. in each one the pigments used are the same but the binders are different.

- white
  - lead white
  - zinc white
  - titanium white
- yellows
  - naples yellow, light and dark
  - cadmium yellows
  - chrome yellow
  - yellow lakes
  - raw sienna
  - zinc yellow
  - ochre
- red and violets
  - rosemadder
  - alizarine crimson
  - cadmium red
  - vermilion
  - untramarine red
  - red oxides
  - red ochre
  - caput mortuum
  - mars violet
  - ultramarine violet
- browns
  - burnt sienna
  - umber (raw)
  - umber (burnt)
  - van dyck brown
- greens
  - green earth
  - ultramarine green
  - burnt green earth
  - vuruduab
- blues
  - ultramarine blue
  - cobalt blue
  - cerulean blue
  - prussian blue
- black
  - ivory black
  - lamp black
  - iron-oxide black
  - vine black

brushes

there are many different types of brushes used in the various painting techniques. the size, number and type of brushes one uses are largely matters of personal taste, but it is always an advantage to have an adequate supply on hand.

there are two main divisions of brushes: sable, which are soft, and bristle, which are hard and stiff. sable brushes are used mainly for water color, as they lend themselves to a wash technique, which is the method used in painting in this medium. these brushes are usually round and vary in size, ranging from very small, to medium, to quite large. naturally, the painter need not have every size but will choose those which suit his working methods best.

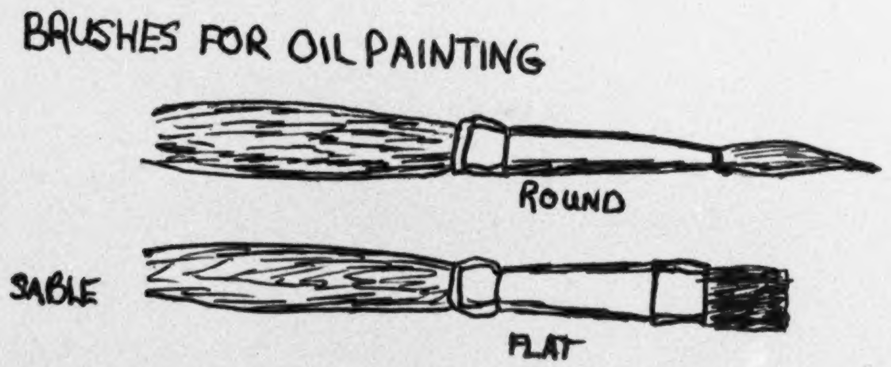
a good water-color brush should have a single point. this quality can be determined by dipping the brush in water and then shaking it. if it does not point readily, or if the hairs remain separated, it is not a good brush.

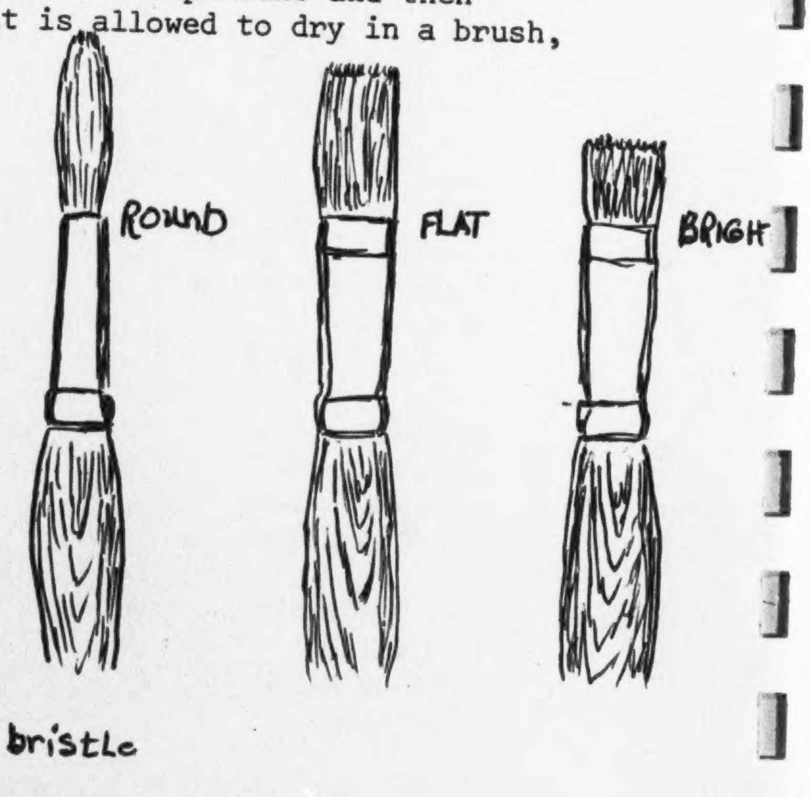
sable brushes are also used for oil or tempera painting, but these are of a different type. they are generally flat and are used mainly for blending colors on the canvas or for obtaining soft, smooth effects. these, too, should point, but from the end. there is also a round sable brush for oil which is useful in detail.

bristle brushes come in three categories: rounds, flats and brights. again, it is a personal matter with the individual which types and sizes he prefers.

bristle brushes are more resistant than sable and allow a greater manipulation of a heavier substance such as oil paint and, to some degree, tempera. different effect may be achieved with each type of brush, the rounds giving brush strokes which differ from those obtained with the flat. the brights again differ from the other two, and these, having shorter hair and a flat construction, can be used for soft blended effects. they are also useful for assembling.

brushes should be cleaned immediately after being used, while the paint is still fresh. water-color brushes are easily cleaned with soap and water. oil brushes are best cleaned by dipping them in xylem or turpentine and then washing them with soap and water. if oil paint is allowed to dry in a brush, the brush is ruined.





the mural

I. mural painting concerns that area of ART which has for its objective the covering of a building so that its purpose may be intensified by the decoration.

throughout history the style of mural painting has closely followed that of movable paintings. previous to the greeks and romans, flat effects were prized; giving way in classical times to illusionistic vista and scenes of natural detail. medieval murals again became somewhat non-spatial, although often were modeled solidly. the west, but not the orient, broke with this tradition in the renaisance, gaining in the baroque period such radical illusionistic effects as to dissolve the wall almost totally. contemporary mural painting began with the representational and conventional wall treatments offered by the professional decorators of the late nineteenth and early twentieth centuries. during the 1920's in mexico, mural painting enjoyed a strong revival which ranged from the two-dimensional and decorative effects of rivera, through the more three-dimensional and dramatic effects of orazca to the multi-viewed and dynamic outdoor experiments of siqueros.

there are several distinct schools of mural painting, each with its own debits and credits:

1. the naturalistic school
2. the romantic school, which feels that it is the duty of the mural to "uplift" humanity
3. the photo-mural school, which has an affinity to enlarge photographs
4. the propaganda school.
5. the abstract school

II. selecting the theme

how does one select a theme for a mural to be used as a classroom activity? the nature of the theme can be as varied as the world itself, but it should be tempered with discretion. mural themes are traditionally story-telling and message conveyors, and for that reason can carry powerful social and religious implications. since the school is a community institution, it might be wise to tread lightly in these areas and offer a minimum of controversial matter.

the theme can be arrived at by leaving it open to classroom choice. the instructor should direct the general area of the theme selections to make it most acceptable to the majority of the class. the teacher may also present a number of choices to the class for their selection.

the various types of subject materials to be used in the mural sometimes are so obvious they are difficult to see. for example, the community offers a wide range of themes. community resources such as occupations, recreation, school related subjects, and attractions are valid suggestive starters. from there, we can widen our scope to area, states, and country suggestive material.

music and literature are rich in resource material. themes can be worked around songs, they can be selected from children's literature, the great age-old literature (e.g. the bible) and from current literature.

abstractions also have great possibilities. difficulty often arises in actual work because of weak design and problems in the division of labor.

III. organizing the class

classroom organization often presents one of the largest barriers in mural construction. if students do not cooperate, the mural as a whole and the experience for the class are not utilized to the fullest extent. if all students activiy participate, the mural is a rewarding part of their experience, not only in ART, but also in learning group cooperation.

after a theme has been selected the group should decide (under teacher supervision) how to divide the work. some students must be responsible for general type of work such as hanging the mural, cutting paper, etc. if each individual is to be responsible for a fragment of the mural, it might be wise for them to collect background information on his or her particular area. this information could be assembled and presented to the class before work is begun, thus aiding in bringing about greater unity within the mural.

IV. technique

when selecting the technique, many factors are important to consider.

first, how large is the mural to be, and what space will it occupy? the mural should not look like it was just stuck on the wall, but it should fit the space it occupies. care in selecting a space is vital in making the mural an effective work of ART.

V. the materials used

the materials on which a mural is done should be consistent with the theme. corrugated cardboard, smooth cardboard, fiber-board, masonite, and heavy paper are excellent. any material which may be inexpensively purchased, and which is durable enough to withstand some handling can be considered.

the medium also requires good judgment. generally, materials such as colored pencil, crayon, and water-color are rather poor because of the slow process in covering areas. tempera paint is widely used because it is inexpensive and it covers large areas rapidly. colored chalks can also be used quite effectively. a fixer should be sprayed over colored chalk after finishing to prevent smudging, and transferring of chalk to clothes. a commercial fixer or a mixture of shellac and alcohol work very well. cut pieces of colored paper also have possibilities as a mural medium when used for a collage or mosaic effect. it produces a consistency throughout the mural.

the different kinds of material to be used are unlimited, but restraint must be used to keep the mural from appearing overworked. the expense, ease of handling, and finished appearance are factors to consider when selecting material, but almost anything can be used if done with good judgment.

VI. having selected the theme and the material, the group is ready for the process of making a mural.

a. first, a series of sketches should be made to decide upon the general scheme and details of the composition. Having arrived at a general scheme, various ideas and possibilities of composition should be tried. the group can then decide on those which best seem to fulfill the conditions of the theme. it should be kept in mind that the interest of the design should be distributed over the whole surface, other wise the effect of decoration will be lost, and, in the most favorable circumstances, a purely pictorial interest results. when enlarged to full size from its preliminary sketch the mural should have its interest so distributed that it fulfills its function, to decorate the wall.

b. enlarging the mural design from a sketch can create some problems, but with sufficient forethoughts to composition, these need not be too troublesome. for example, an area that appears adequately designed and accounted for in the sketch could easily, when enlarged look flat and uninteresting. it should always be asked of a mural sketch, how it will look blown up x times its original size.

for wall painting, the design is drawn first on a cartoon, that is to say, the outline of the design in the actual size of the mural. this is transferred to the wall by tracing and can then be painted. but in most classroom situations it is the cartoon itself that is painted. say, for example, the group decides to paint on a panel of heavy paper. they must find a method of enlarging the sketch to fit the panel. many methods are possible, such as projecting an image of the sketch on the panel with an opaque projector, or more practically, by figuring the scale mathematically, (e.g. 2" to a foot, etc.) and measuring each componant part to scale on the mural. another consideration is to block off the sketch with vertical and horizontal lines, do the same to the panel (in the correct scale) and copy from the sketch, working on one block at a time.

c. now the mural can be hung in the space it is to occupy, and is ready to be painted. it is well to remember that colors have different carrying power, so that those parts of the wall which are in the shade must be treated differently from those which are in light, and the colors in any case should be so arranged that they hold each other in the same plane, otherwise the painting will look restless and patchy.

VII. evaluation

the revival or mural painting in the twentieth century has certainly proven an important impetus in school ART. it offers the possibility for expressing collective ideas and interpretations in a single organized work of ART in an atmosphere of mutual cooperation. for if a group mural is to be successful, and a successful product is important, the individual must not only contribute his own background of knowledge and skills to the common fund, but he must also accept the inevitable point of logic that his is not the only solution to a given problem. his experience in a cooperative project such as the mural should be enriched by his close proximity to the ideas and techniques of his associates.

VIII. examples of murals by local artists

1. John Anderson - an abstract mural in dayton's valley view room, southdale.
2. Bernard Arnest - an abstract mural in first southdale national bank, southdale; a thematic war memorial in the veteran's service building, st. paul.
3. Birney Quick - a minnesota historial mural in the lobby of the minnesota mutual life insurance building, st. paul.

three dimensional design

definition of 3-dimensional:	three dimensional design is the art of creating figures, objects or abstractions in the round or relief by chiseling stone, casting metal, carving wood, modeling clay, etc.

suggested problems for three dimensional

- papier mache
  - a brief history
  - materials and preparation
  - method
  - other uses
  - decoration of papier mache articles
- plastics
  - introducing the plastics family
  - methods of processing plastics
  - types of plastics and attributes
- stone sculpture
  - history
  - materials and preparations
  - stone sculpture in the classroom
  - trip to Mr. Toni Caponi at macalester college
- miscellaneous sculptural material
  - sculp metal
  - salt block
  - fire brick
  - wax
  - foam glass
- mobiles
  - design considerations
  - materials and tools
  - construction

suggested problems for three dimensional

I. art in the home
- design the floor plan of a house. define the family, needs, etc. (floor plan, floor plan and perspective drawing of exterior, or model)
- plan the interior of a room or part of a house. (drawings and material samples, or model)
- design a lake or vacation cabin. (model)
- redesign (plan the remodeling of) an existing house. (drawings or model)
- make a model of an outstanding contemporary house.
- design furniture and render in model form.
- plan the landscaping for a residence, store, etc. (model)

II. art in business

- design a window display. define the purpose to be accomplished. (model)
- design a counter display of merchandise, a store interior or section of an interior. (model)
- design or redesign the package or container for specific items of merchandise. (models)
- develop a more-or-less complete advertising campaign including:
  - magazine or newspaper ads
  - direct mail ads
  - billboards or car cards
  - counter or window displays
  - tv commercials
  - package, container, labels, logotype
- design the general layout of a shopping center. (model)

III. art in communication and entertainment
- design a stage set for a specific scene of a specific play or for a play (or ballet, etc.) which you create in preliminary form. design for the conventional stage, the three-quarter platform or the stage "in the round." (model)
- design costumes for a play or ballet. (drawings and/or dressed figures)
- design a set and/or costumes for a tv production or drama.
- design a display device for school, convention, or business situation. (model plus samples and explanation)

IV. art in the community
- design a public park. (model)
- design a children's playground. (model)
- design a plan for the development or renovation of an urban area. (model)
- design a church or other semi-public building. (model)
- design a governmental building. (model)

papier mache

a brief history of papier mache

the original meaning of the french words "papier mache" was "made of pulped paper." early in the eighteenth century in paris various posters and bills were put up nightly and torn down the next day. it was for making use of this scrap paper that the papier mache process was invented.

in china, much earlier than the eighteenth century, warriers rode into battle wearing helmets of the same substance.

at the end of the eighteenth century, an englishman invented the newer process of pasting sheets of paper together, making a substance of strength and lightness.

materials and preparation

I. materials.
  a. essential materials.
    1. any absorbent paper: newspaper, paper towels, toilet paper, blotting paper, sugarbag paper, paper packing (don't use glazed paper or smooth surfaced paper).
    2. paste mixtures.
      a. starch, water, soap.
      b. flour, water, and either salt, alum, or glue.
      c. paper hanger's paste, water, salicylic acid.
      d. library paste.
    3. paint, brushes.
    4. shellac, enamel
  b. material when using molds, forms, or armitures.
    1. wire.
    2. clay.
    3. plaster caste.
    4. bowl, plate, etc.

II. preparation.
  a. paper.
    1. pulp.
      a. tear paper into small pieces. (do not cut, as cut edges will make ridges in the work.) soak pieces for at least one hour. remove paper from water and squeeze with a rolling pin or under a press. mix half and half with paste mixture.
      b. another method is to soak paper packing in water. squeeze out water and run through coarse grater. mix half and half with paste mixture.
    2. strip.
       tear long strips 1/2 to 1 inch wide. do not soak, but run through paste mixture before using.
  b. paste mixtures.
    1. starch
       mix a little cold water into one cup starch in a saucepan; stir until smooth. add hot water and cook until thick, stirring frequently. add soap to prevent souring.
    2. flour.
       mix a little cold water into one cup flour; stir until consistency of thick cream. add boiling water until paste thickens. to make mixture more adhesive, add a teaspoon of powdered alum. salt or powdered glue may also be used.
    3. paper hanger's paste.
       mix a small amount of salicyclic acid with one cup paste; add to water and stir.
    4. library paste.
       add water to paste and mix until thick and smooth.

method

I. the direct method in handling papier mache.

A. without armature

use a pulp mixture of papier mache and mold as you would in clay. you will have to keep your figures small for they will not stand up too readily if too large. in order to finish off the product, if a smoother finish is desired, use strip papier mache.

B. with armature

with the use of an armature the figures can be of any size and shape as desired, only your imagination limits you. here are a few hints in using an armature.

1. keep from putting papier mache on straight wire, instead curl or wave wire so that there will be a surface to which the papier mache can cling.
2. much of the large shapes can be hastened by wetting dry paper, for instance the head of a figure can be brought to practically the finished size by a ball of paper covered with strips of papier mache.
3. in very large figures chicken wire makes a good armature.
4. a good rigid armature is easier to work with.
5. have a base of design so that it will stand up alone while drying.

II. indirect methods

A. over a mold or form

1. masks or puppet heads

a. over a clay or plasticine mound.

make a clay or plasticine mound on a board. grease well with vaseline or some other grease when the form has been modeled. papier mache may be applied in thick pulp in any of the mixtures or in strips.

b. over face

bind a piece of cheese cloth over the model's face and tie at the back. lay strips of dampened gummed craft paper over the cheesecloth with the sticky side to it. the strips should be 1/2 to 1 inch wide and should be overlapped slightly. avoid closing the nostrils or the eyes but otherwise press the paper firmly into all the depressions. the process is not uncomfortable if the nostrils are left open. after one layer of strips is laid in one direction, the second layer should be applied in the opposite direction. continue for as many layers as desired. three or four layers should be enough. take the mask off the model, add a binding of paper around the rough edges, and allow to dry. may be finished in tempera, watercolor, enamel, etc.

2. bowls and plates

   a. first, be sure that the mold is a shape from which the article can easily be removed (one that is larger at the top than at the base). also be sure that the surface of the bowl or plate is smooth.

   b. either the flour, starch, or glue mixture may be used. apply first layer either in inside or outside of the mold. the first layer of strips may be applied wet without paste mixture. having lined the bowl with paper, brush the paste all over and proceed with the next layer in the opposite direction. continue in this way until sufficient layers have been added to give the desired thickness (for a small bowl of about 5 inches diameter, eight layers are required and proportionately more for larger bowls).

   c. allow the papier mache form to dry on the mold; when sufficiently dry it will come off easily. if the outside papers seem a little loose, brush them over lightly with paste and continue to dry the shape. in any case, it is a good plan to do this, as the color and varnish will then be less inclined to soak into the surface.

   d. cut off rough edges and bind with gummed tape. bowl may be sanded to make the surface smooth for painting.

3. vases, lamp bases, fruit, vegetables, and other objects.

   make these similar to bowls by putting on layers of strips of newspaper all over the object. only about four layers of strips are needed for fruits and vegetables. when the papier mache is dry the shell may be cut open, stuffed with newspaper wads and fastened together with more strips.

4. waste basket or similar article.

   a. select a tin basket or pail as a form. be sure that the shape is not curved inward. grease form with vaseline or lard. apply papier mache either to the inside or the outside of the form.

   b. fold three or four pieces of newspaper double, measure the height of the pail and tear triangular pieces of paper 4 inches or 5 inches wide at the base and the same height as the pail. cut a circle, the diameter of which is approximately 4 inches longer than that of the base of the pail. put aside as a pattern for making the bottom.

c. begin pasting the strips. if working on the inside of the form, place the triangle on the inside of the form, paste-side away from the pail, large end at the bottom. place the next strip in the opposite way, large end at the top. this will compensate for the contour of the mold. continue to build up layers.

d. using the pattern of the base, make several copies. tear these into pie-shaped pieces and cover with paste. put in the bottom of the pail face side up, overlapping and coming up about 1 inch on the sides.

e. soak heavy cord in glue and lay around the rim. cover with strips of paper.

f. the bottom and sides may be made in one piece using longer triangular strips.

B. inside a mold or plaster cast

many papier mache articles may be made on the inside of plaster molds. the steps are the same whether the mold is for a puppet head, hands, feet, mask, bust, or any other shape such as an ash tray, etc.

1. treat mold in one of the following ways to prevent paper from sticking to it.

   a. a solution of beeswax and turpentine (heat together until wax melts and brush in mold).

   b. shellac mold and rub with oily rag

   c. brush with paraffin, vaseline, lard, or olive oil. apply thinly.

2. either pack papier mache pulp of any mixture firmly into the mold or use the strip method, alternating the direction of each layer and overlapping the edges. if pulp is used it must be packed very tightly.

3. build to desired thickness and allow to dry in mold.

4. when dry remove from mold and touch up holes with plaster made up with size. this mixture will not set for several hours but will adhere very strongly to the paper surface and takes sandpaper well. gesso may also be used.

5. trim rough edges and strengthen with tape or sugar paper. brush the inside (if it is hollow) with shellac, varnish or paint. finish top surface.

6. if there is both a front and a back cast (as in a head), the two halves may be fastened together with lathes. fix the short lathes at one end inside the edge of the back cast with thick plaster gauged with size,

leaving the other end sticking out clear of the cast. when they have firmly set, gauge up some more thick plaster with size, and plaster up the uncovered ends of the lathes and push the front cast or mask over them. a certain amount of plaster will squeeze out of the joint and this, when trimmed off and sandpapered down, will effectively seal the joint. another and a quicker method is to place the two casts together and wipe strips of plaster soaked scrim across the joints.

papier mache may also be used in metal pressure moulds and poured in a wet pulp mixture. considerable pressure is needed but when dry the papier mache is perfectly smooth. this method is usually not found in schools because of the high cost of the metal moulds.

other uses

puppet heads: using pulp, model a head and neck. hollow out a hole in base of neck for forefinger, or model directly over forefinger. tie about a 6 inch length of knit stocking around puppet neck. this slips over the hand. slits are cut for thumb and forefinger. clothes are sewn to the stocking foundation.

dolls and animals: pulp method: make wire armature. straight wire will not hold pulp, so make loops at head, feet and hands. to facilitate bending a pulp figure into position, cover with torn rag strips and bend while wet. yarn or string may be used for animals' tails.

strip method: use a wire armature or armature made of tightly rolled newspaper bent and tied into position. make additional padding and filling in of form out of dry crumpled newspaper and tie it securely with string. cover the padded armature with strip papier mache.

fruits and vegetables: these may be made over a mold, the shell cut and removed, stuffed with dry crumpled newspaper, and sealed with more strips. or, a crumpled dry newspaper may be made to suggest the form, and may be covered with strips.

relief maps, portraits, landscapes: these are modeled over an outline drawn on heavy cardboard or a wood backing.

story illustration: children may model out of pulp or use the strip method to illustrate their favorite story, or picture some other school activity. pasted sheets of paper may be cut with scissors. example: an indian teepee may be made by cutting out a pie shaped wedge and forming the remainder of the circle into a cone shape for the teepee.

party decorations and favors: may be made from pulp, strings, or sheets of paper pasted together and cut with scissors into desired shapes.
example: paste sheets of newspaper together about three or four, cut out petal shapes and a circular center. give petals a twist. when dry, paint, shellac, and glue on center, making small candy cups.
molds used by printers for stereotyping
busts--(2 piece mold needed)
display--papier mache heads for millinery display
dummy figures for dressmaking
picture frames

decoration of papier mache articles

items made of papier mache must first be well dried. items made from strip papier mache can then be sandpapered with a very fine sandpaper. after that paint is applied.

paint with: tempera, with a final coat of shellac, waterlox, or cabinet rubbing varnish for durability and permanence.

oil paint over a shallac or dull varnish base

enamel

house paint

metallic paints

colored paper may be used on some items for a first and last layer, thus eliminating painting. shellac is necessary for a protective coating.

plastics

introducing the plastics family . . . . . .

- man made materials
- research still going on

"plastics" is just a family name like "wood" and "fabric"

there are 11 types . . . . . .

. . . . all of which fall into 2 groups:

1. thermoplastic plastics

adrylics

cellulosics

nylon

polyethylene

polystyrene

vinyls

these plastics soften under heat and harden when cooling.. reverting to original form.

2. thermosetting plastics

cast phenolic

casein

molded melamine

phenolic

urea

these plastics are permanently set into shape by heat when being formed. heat applied later on will not restore them.

the most common methods of processing plastics are:

molding

both thermosetting and thermoplastic materials can be formed into products in molds, using heat or pressure, or both.

fabricating

fabricated plastics are made from sheet, rod, tube, special castings or film by machining, cutting, sewing, heat sealing or similar processes.

laminating

laminated materials comprise layers of plastic, paper, fabric or other sheeting held together with plastic adhesive. most familiar as flat surfaces, they are also used to shape parts.

extruding

in extrusion, plastic is made into continuous forms by being forced through an opening shaped like the cross-section of the finished product.

calendering

thin sheets or film are produced by forcing the plastic between heavy revolving rollers. plastics may be applied to paper or cloth in this manner.

type of plastic	trade names	typical uses	what it can do	disadvantages	color possibilities
acrylics	lucite plexiglas	hair brushes salad bowls lamps clock cases	capable of tube lighting. picks up light at one edge and transmits it unseen, even around curves. light in weight, holds shape. difficult to break. resists weather.	will soften if subjected to high heat.	full range of transparent, translucent, opaque colors. also corrugated and patterned surfaces.
cast phenolic	bakelite cast phenolic marblette	cutlery handles desk set pen bases	rigid, strong, holds shape. scratch resistant. marble effects. resists water and chemicals, non-inflammable	will fade and crack if exposed to elements. cannot be hammered.	full range of transparent, translucent, opaque colors.
casein		buttons buckles knitting needles	strong, won't burn. resists chemicals and solvents		full range of translucent and opaque colors.
melamine and urea	melmac resimene plaskon melamine beetle (urea) plaskon urea	wiring devices kitchen utensils tablewear buttons	resists oils and chemicals. light in weight. hard surface	melamine more heat resistant than plain urea. melamine brittle.	unexcelled in full range of colors. color fast.

type of plastic	trade names	typical uses	what it can do	disadvantages	color possibilities
molded phenolic	bakelite phenolic durite durez resinox indur	iron handles light switch plates radio cabinets vacuum cleaner housings	strong heat resistant resists water and chemicals		no light or pastel colors
nylon	nylon	kitchen funnels slide fasteners brushes fish lines	strong can boil	burns	milky white or pastel
polyethylene	bakelite polyethylene dupont polythene	ice cube trays frozen food wrap raincoats bottles	remains flexible won't break, resists electricity resists some heat resists chemicals		soft pastel shades
polystyrene	styron lustrex plexene "m"	refrigerator boxes small radios wall tile toys	softens when exposed to heat	cannot be put near heat or hot water	colorless and full color range
vinyls	geon marvinol ultron vinylite	upholstery flooring phonograph records raincoats houses	maintain their dimensions, resists water, resists chemicals strong and tough	will burn slowly	wide range of colors

type of plastics following are	trade names	typical uses	what it can do	disadvantages	color possibilities
cellulosics: cellulose acetate	fibestos kodapak "1" plastacele tenite "1" nuepak	toothbrushes sunglasses toys transparent packages lamp shades	tough odorless resist chemicals	not good outdoors or exposed to weather	wide color range
cellulose acetate butyrate	tenite "2" kodapak "2"	lawn mower rollers high chair trays steering wheels fish lures fruit juicers	molded or sheets or film will not lose shape doesn't shatter	cannot be boiled	
cellulose propionate	gering c.a. hercules	telephone housings fountain pens	fabricates easily resists hard knocks	does not resist chemicals	unlimited colors
ethyl cellulose	fibestos nitron	tool handles flashlite cases clock cases	resists knocks hold shape	does not resist hot water	all opaque colors
cellulose nitrate	nixon nixca nixcn nixec celluloid	fountain pens optical frames table tennis balls tool handles drawing instruments	resists acids, ink resistant - available as sheets, film, rod, tube - can be fabricated	cannot be molded cannot be exposed to weather	full color range

stone sculpture

I. history of stone sculpture
    a. ancient stone sculpture
        1. paleolithic period
            a. stone age
            b. woman carved in stone
        2. easter island heads
            a. huge slabs of stone
            b. stark and solitary from the earth
            c. figures of heads and men
            d. records of forgotten age and people
        3. petra
            a. caravan stronghold
            b. city carved from stone
        4. medieval
        5. renaissance
            a. Donatello
            b. Michelangelo
        6. realism
            a. Rodin
        7. modernism
            a. Lehmbruck
            b. Brancusi
            c. Henry Moore

b. contemporary stone sculpture
  1. started in 1800's in u.s.
  2. adventure and experimentation
    a. simplifying forms
    b. creating abstractions
  3. emphasize characteristics of stone
  4. truth to the material
  5. Jose de Creeft
  6. John Flannagan
  7. Oronzio Maldarelli
  8. Raoul Hague
  9. Beniamino Bufano
  10. Henry Moore
  11. lively and creative age today in stone sculpture
  12. physical aspects of stone
  13. purposes behind stone sculpture
  14. appeal to beauty and truth
  15. reflection of periods of time.

II. materials and preparations
  a. selection of stones
    1. sandstone
    2. limestone - soft-medium hard
    3. marble - medium hard - hard
    4. granite - very hard
    5. local stones

b. tools

1. minimum essentials

a. broad blade flat chisel - two widths

b. pointed chisel - detail work

c. tooth chisel - shaping and textures

d. short handled hammer - heavy head

e. protective eyeglasses

f. emery board - sand paper

g. coarse toothed rasp

2. tool upkeep

c. subject, sketch, carving

III. stone sculpture in the classroom

a. personal experiences

b. available sources of stone

c. general discussion

IV. trip to Mr. Tony Caponi at macalester college

miscellaneous sculptural material

sculp-metal salt block fire brick foam glass wax

introduction

the purpose of the miscellaneous sculptural material group was to explore the possibilities of five different sculptural materials. by first demonstrating in front of the class and then having the members participate in the testing, a final evaluation was made of the advantages as well as the disadvantages. the following report lists the material, tools, working process and where it will be most successful in the classroom.

I. sculp-metal
  a. aluminum compound, a true metal which air-hardens without chemicals, heating or baking.
    1. putty like consistency
    2. does not chip, crack, expand or shrink
    3. resists high temperature, withstands most acids
    4. adheres to metals, woods, plaster, leather, fabrics, ceramics, and some plastics.
  b. tools and working materials
    1. pliers
    2. tin shears
    3. palette knife (or substitute)
    4. rasp
    5. file
    6. steel wool or brush
    7. sandpaper

c. technique

1. direct modeling technique, using a hollow core armature for strength and for economy of material. layers of sculp-metal are built up successively. multi layers fuse together. allow first layer to dry thoroughly before adding additional layers. do not apply sculp-metal thicker than 1/8 inch at a time.
2. sculp-metal can also be used over solid cores of nearly any material. it may be brushed, spread, or sprayed (when mixed with thinner.)

d. finishing and coloring

1. interesting finish effects may be produced by using a file, steel wool, saw burnishing tool, or back of a teaspoon.
2. patinas may be obtained with the use of waxes, pastes, shoe dye, and oils. a coating with clear lacquer will protect the burnished finish.. unprotected burnished finishes will dull at a very slow rate.

e. other uses of sculp-metal

1. it can be used to anchor mosaic stones and tiles to bases, to create an inlaid metal effect. enamels may be bonded to backings with sculp-metal. unusual jewelry can be produced with stones, gems, shells and other ornamental items mounted to form brooches,etc.

f. sources

   1. available at most art supply outlets and crafts shops.

   2. for more information write to the sculp-metal company, 701 investment building, pittsburgh 22, pennsylvania.

g. cost

   1. three pound can, $5.00

   2. twelve pound can, $20.00

   3. one pint thinner, $1.00

   note: aluminum putty sold at hardware stores in tubes, $1.00

class evaluation of sculp-metal:

a versatile product which creates interesting effects and lends itself to experimentation. however, too costly for general classroom use. might be limited to individual student..but at least introduced in some form to the entire class.

II. salt block

   a. hard, granular, stone-like composed of granules of salt particles massed together, giving it a distinct color of its own (either white or dusty rose). comes in rectangular shapes, weighing four pounds and twenty-five pounds.

   b. tools need to be strong and sharp

      1. chisel, can opener, screwdriver, or other instrument with sharp edge and good handle.

      2. rough and medium file about eight or ten inches long.

      3. glove or cloth while working with file.

c. process

   1. can be cut with a saw (hack saw is best,) chiseled, gouged, and scraped. hardness of material requires force in working.
   2. cloth or glove will be used when working with file. salt seems to draw moisture from your hand to the surface of the skin. unless this is absorbed, blisters will develop.

d. three basic conditions needed in classroom

   1. time..a small block requires eight to ten hours.
   2. work space..while this isn't a particularly messy medium, there is considerable fine grain waste and particles fly several feet when chipping is done.
   3. skills..because of the materials hardness, it takes strength to work on it. you must bear your weight on the cutting edge. without control this might be dangerous. chipping must be done away from the face to protect the eyes.

e. cost - 20¢ and $1.15 (either plain or iodized)

class evaluation of salt block:

best suited to senior high school students with the interest, patience and persistence required for stone sculpture. definitely a slow process, limited in size of block, color and capacity for details.

III. fire brick

textured brick available in only one size: 2 1/2" x 4 1/2" x 9"
two colors: white and amber.

a. tools
    1. pen knife
    2. rasp
    3. sandpaper

b. working process
    1. simple cutting or chipping away of strata to obtain rough form. refinement done by rasp. sandpaper will smooth out surface, leaving an interesting, hole flecked finish. can be sealed with coat of shellac.
    2. material easily lends itself to strong, simple forms, particularly in abstraction.
    3. difficult to work in fine detail.. fire brick has a tendency to chip and break off.

c. working conditions
    1. space and protection of newspaper underneath material while working.
    2. dust and chips scatter around surrounding area.

d. cost - 25¢ per brick

class evaluation of fire brick:

could be used in fifth and sixth grade on up to senior high school. quick and easy to work with, requires only a few inexpensive tools, brings interesting results in a short time. attractive colors and textual effects. highly recommended for introducing sculptural forms.

IV. wax

a. equal parts of:
   beeswax - $1.35 - $1.60 pound
   parafin - .25 pound
   lump rosin- .25 - .65 pound

b. color with powdered lamp black: melt beeswax first
   parafin second
   rosin third

c. working process..use knife bunsen burner or candle and remove wax by heating and cutting

   stir frequently, add lamp black, pour in oiled metal pans, cut in strips when half hard, remove when hard.

class evaluation of wax sculpture:

recommend for senior high, particularly advanced, well disciplined students. cooking of wax is long process but actual working process is quick and unusually flexible. lends itself equally well to realistic and abstract form. excellent for working in three-dimension. advantage of being able to melt wax and use it over and over. disadvantage is expense and possible fire hazard.

V. foam glass

a. originally an insulating material composed of:
   1. ground glass with added chemicals (carbon which gives it the black color.)
   2. sulfur compound (which, fortunately, produces the characteristic sulfur smell when first being cut.)

b. materials
    1. pen knife
    2. rasp or sand paper

c. appearance
    1. attractive, slightly sparkly black texture that needs no further treatment, however, it may be painted with tempera colors, silver or gold paint or simply sealed with shellac for shinnier finish.

d. characteristics of foam glass
    1. light weight (weighs only nine pounds per cubic foot.)
    2. it is incombustible
    3. will not absorb water
    4. great compressive strength
    5. doesn't decay (bugs won't eat it!)

e. encourages big, simple forms that are dictated by the nature of the material.
    1. interesting objective and non-objective forms can be made quickly.
    2. nature of foam glass does not lend itself to meticulous, time consuming detail (that would exceed the interest span of the student.)

f. variation of finishes

  1. by coating with a layer of sculp-metal, using foam glass

  2. by using a thin coat of plaster of paris, perhaps adding dry color to the plaster (and not mixing too thoroughly) achieving an antique finish.

  3. by simply using fine sandpaper for a smooth, natural finish

g. available at local builders supply store in blocks varying from 12" to 24" lengths: 2" to 4" thicknesses

h. cost - slightly over $.18 per board foot

class evaluation of foam glass:

an extremely easy material to work with, limited only by the imagination of the student. brings interesting, artistic results and could be introduced to junior high as well as senior high. disadvantage of breaking easily, if damaged, of having sulfer smell while working, and of scattering fine black dust. note: due to abrasive quality, protective cover should be used on table tops. otherwise this is a fine introduction to sculptural form -- inexpensive and conducive to building the student's confidence in this medium.

* can be dangerous - students should use goggles or goggle sunglasses.

* students should be told to keep hands away from eyes while handling the foam glass block

mobiles

mobiles have very little tradition behind them. they are a new ART form. the first mobile in the style with which most of us are familiar was created in the early 1930's by Alexander Calder. it was he who gave this ART its entire general direction and specific style.

as an ART form, mobiles are related to sculpture, painting, drawing and design. because they are three-dimensional, ART critics often refer to them as mobile sculpture. this term is intended to explain that mobiles are a form of sculpture that moves. however, this emphasis on the sculptural qualities of mobiles is misleading. it ignores the very close relationships of mobiles to drawing and painting. the many pieces are like silhouettes or outlines. when painted they have much the same quality as shapes cut out of an abstract painting.

design considerations

a mobile exists in three dimensions; but it does not completely exclude space and light from within itself, nor does it completely enclose any given space. it consists of a series of two-dimensional shapes combined to form an abstract composition. the shapes are separated, each one surrounded by its own light and form, and color. the connecting wires form a thin network and are a subordinate part of the composition. they are very much like the lines in a drawing.

the space in which a mobile moves is as important as the mobile itself. the best mobiles have a life of their own and appear to be moving according to a plan; the forms are purposeful and often point to one another or indicate directions in which the observer should look. not only are the designs of the individual shapes important, but also important are the design qualities of the areas between the shapes and the integrating network of wire. a mobile must be a harmonious whole.

the character of movement in space is another important design consideration. the elements of motion can be controlled by giving each mobile a special character, making it more dreamy solemn, or witty. again, the shape of the individual elements should be designed with some forethought as to the type of movement the mobile will describe in space. although there are no set rules, the use of free forms for the shapes of the free forms seem to echo the graceful, undulating axis that the mobile makes in space.

since a mobile is a construction designed primarily to move overhead in space, the qualities of lightness and illusions of spaciousness which can be achieved through good design are always to be desired. the mobile should at all times appear to be floating or moving through air, never merely hanging in space. should a mobile ever give the impression that it is ready to fall in the event that another piece were added or ever make us afraid to walk under it, the construction is either too heavy looking or too static.

materials and tools:

the materials and tools needed for mobile making are simple and inexpensive. you will probably have most of the necessary things in the schoolroom, or you will find that they can be easily obtained. the chief ingredients of a complex mobile are your own ingenuity, imagination, and skill. the basic materials you will need to assemble are the following:

1. cardboard. illustration or poster boards are the most suitable. avoid a very thin board which is liable to warp easily or one which is too thick (it would be difficult to cut with a clean edge). the element of color can be introduced by using colored cardboard or by painting the cardboard the desired color.
2. sheet metal. thin sheet metal is the traditional material for the elements. taggers's tin in .006" and .012" thicknesses is as easy to cut as cardboard and is available at most good hardware stores.
3. wire. galvanized iron wire (in a no. 12, 14, 16, or 18 gauge) is about the cheapest, most easily obtainable wire and is easy to handle. it can be obtained at most hardware stores in one-pound or five-pound coils at approximately 35 cents to 40 cents per pound. aluminum, copper, brass, and steal wires are not only expensive, but also difficult to handle. they are usually too hard, too soft, or too brittle to use just as they are manufactured.
4. thread. nylon thread or thin nylon fishing line is strong, lightweight, and attractive.
5. wood. balsa wood comes in thin sheets or in blocks which can be carved, filed, or shaped. it is very flexible, can be cut with a coping saw or razor blade, and can be glued with duco cement. it is available at any hobby shop. thin veneers, mahogany, oak, red cedar, and birch have an attractive grain and rich color and can be utilized effectively.
6. plaster of paris. molded or shaped (by carving and filing) plaster of paris is another material to consider in mobile construction.
7. plastic. plexiglass, celluloid, and liquid plastics are also good materials.

8. glass. sheets of colored glass are made in a complete range of beautiful colors. they are sold in sheets from 18 to 24 inches to 4 by 8 feet and range in cost from 40 cents to 4 dollars per square foot. only the simplest shapes should be attempted by the student since even an expert is limited by the physical properties of the glass. one of the best methods of attaching a piece is by wrapping it with a fine wire (26 gauge galvanized wire with approximately the same gauge), making a loop of wire or attaching a small ring at the top of the piece, and twisting the wire at the bottom until it is tight against the glass.
9. miscellaneous materials. there is practically no limit to the kinds of materials that can be used to make mobiles provided they are not too heavy and will hold their shapes. christmas tree ornaments, metallic spheres, corks, spools, washers, etc., are examples.
10. pliers. (long-nosed or round nosed pliers with a wire cutter at the side)
11. metal shears. (straight or with curved blades expecially made for cutting curves)
12. scissors. (any heavy duty scissors)
13. mat knife and brushes.
14. soldering iron, solder, and flux.

construction of a simple five-element mobile (one method):

step I. have a good idea of what your finished mobile will look like. although a mobile is a three-dimensional ART form, it can be designed two-dimensionally on paper before the actual construction begins. one way of approaching the mobile design is to cut construction paper into the shapes of the elements and to indicate the connecting wires by line drawing.

step II. cut the individual shapes from cardboard, sheet metal, balsa wood, or veneer. if you are using cardboard or some type of wood, find the balance point of the element by sticking a straight pin into the top edge of the shapes. when you have established this point, punch a small hole approximately 1/8 inch below the pin through the side of the material. through the holes we will later attach wire rings (attaching rings). these directions hold for pieces which you wish to move independently of the arms to which they are attached. pieces attached rigidly to the arms are treated differently and will be described later.

FIG. 1

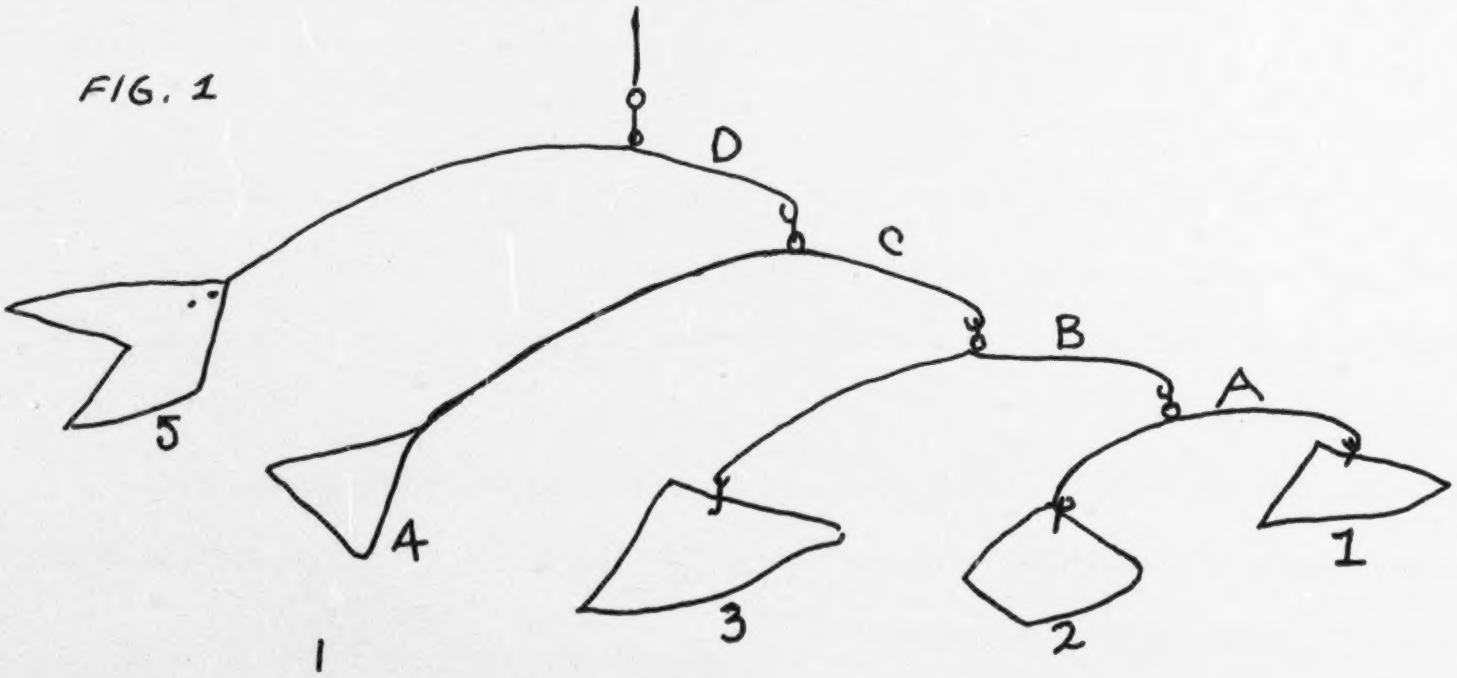


FIG. 2

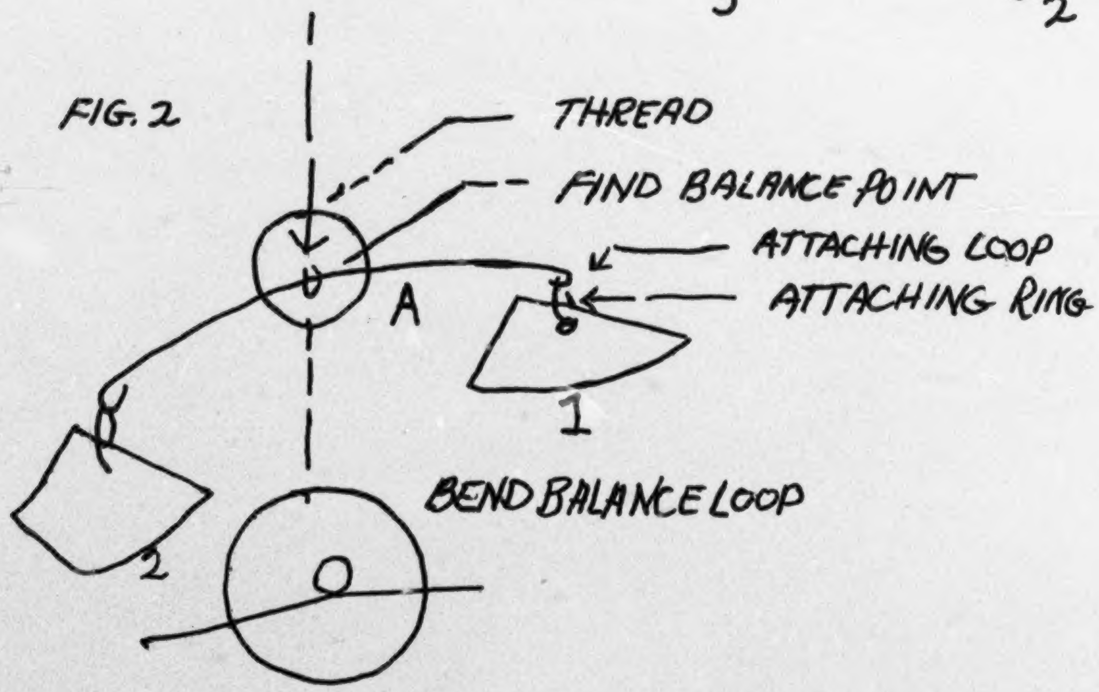
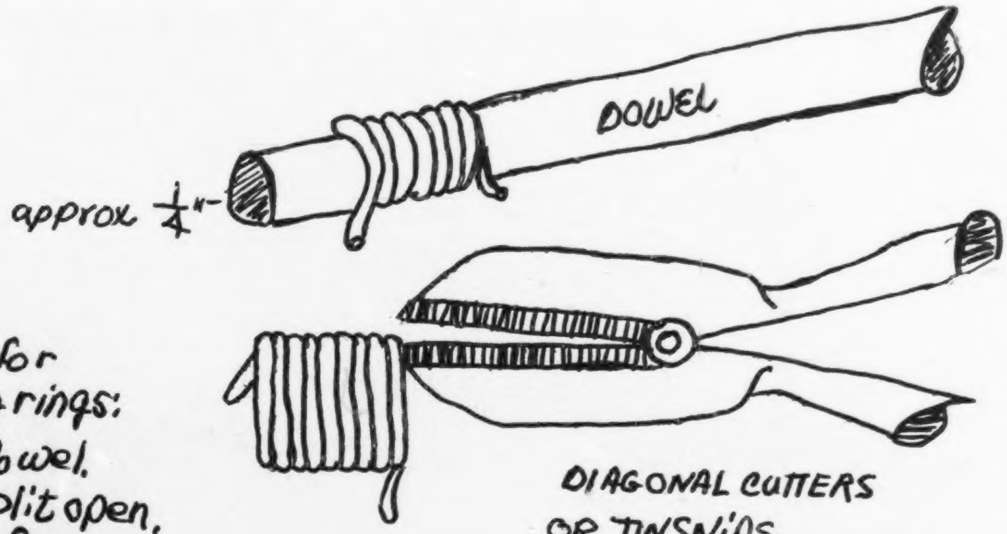


Fig. 3



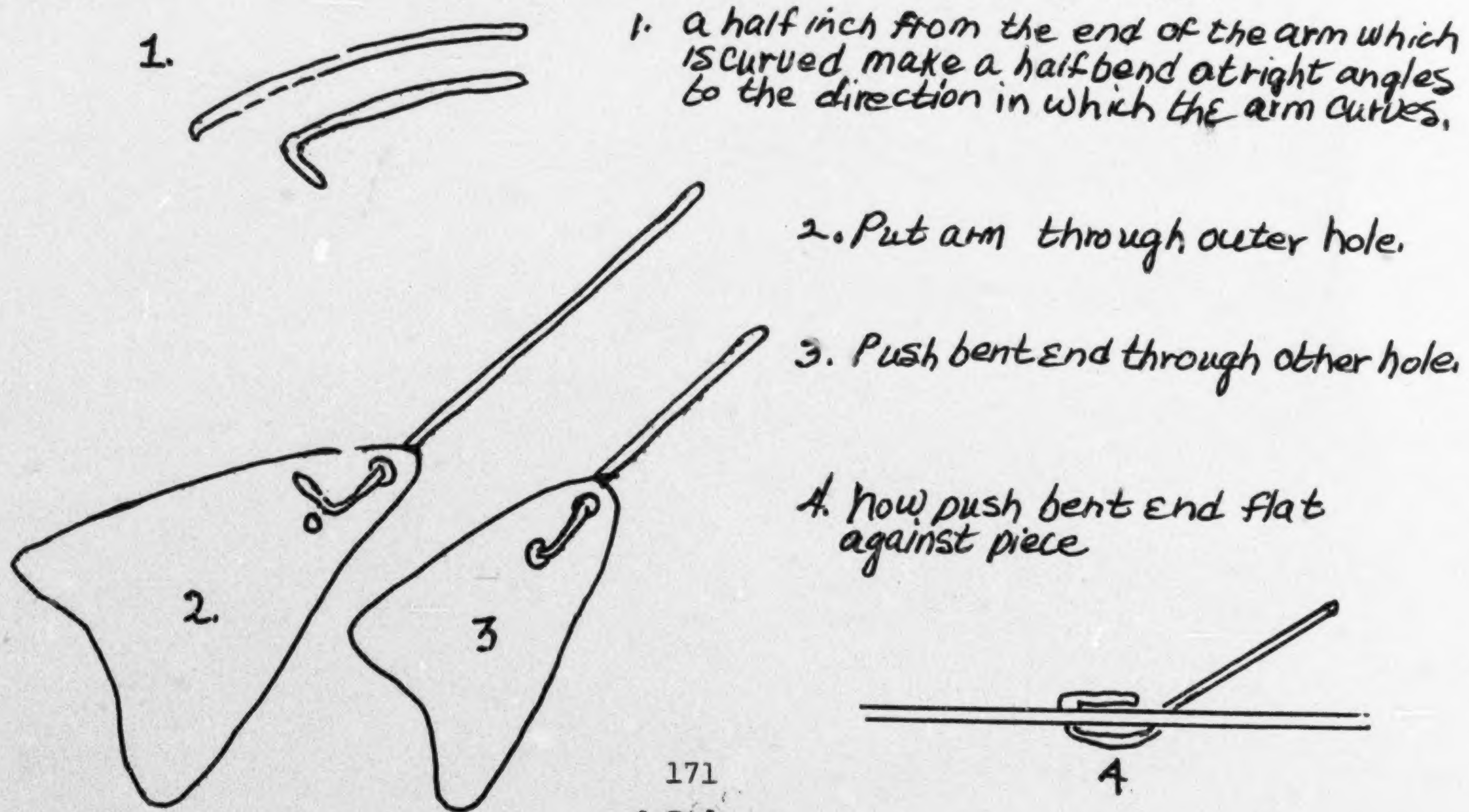
Efficient-method for making attaching rings:
Coil wire around dowel.
remove coil and split open.
end rings will fall free.

step III. using our five-element mobile as an example (fig.1), measure and shape wire for bottom arm (A). bend small attaching loops (fig.2) in either end of the arm. in mobile construction, unless one is an engineer or a mathematician, one should always start with the bottom arm and elements and work up towards the final balancing point. attach elements 1 and 2 to the ends of arm A with the attaching rings (figs. 2 and 3). to find the correct balance point, loop thread around arm A and move loop back and forth until correct slope of arm is found (fig.2).

step IV. bend balance loop at place indicated by thread. the balance loop should always be made above the arm or arc and the attachment loops below it.

step V. measure and shape arm B and bend attaching loops on both ends. attach element 3 with attaching ring and attach bottom element (arm A with elements 1 and 2 affixed) to other end. proceed to find the balance point with thread, and bend balancing loop with long-nosed pliers.

FIG 4. ONE METHOD OF ATTACHING RIGID ELEMENT



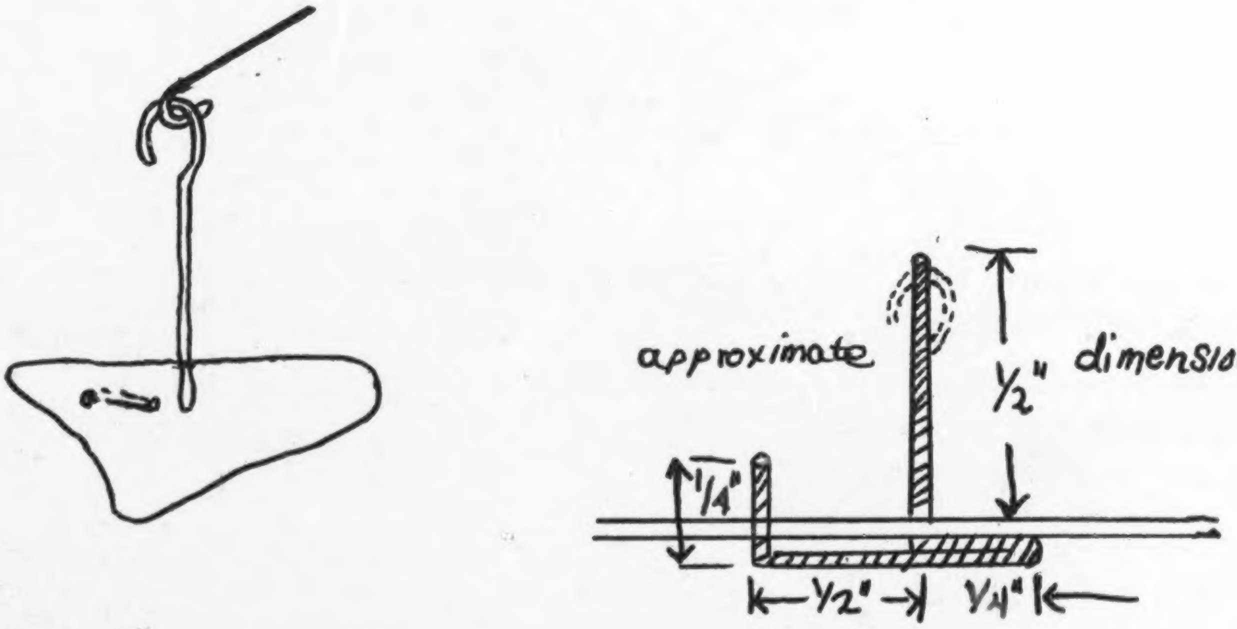
1. a half inch from the end of the arm which is curved make a half bend at right angles to the direction in which the arm curves.

2. Put arm through outer hole.

3. Push bent end through other hole.

4. now push bent end flat against piece

FIG. 5 ONE METHOD OF ATTACHING A HORIZONTAL ELEMENT



step VI. pieces 4 and 5 are attached rigidly to arms C and D respectively as shown in fig. 4. drill or punch two small holes approximately 1/4" apart in each element. attach arms as shown in fig. 4 and balance arm C with combined arms A and B. balance arm D with combined arms A,B, and C, and bend final balancing loop. the mobile is now finished and ready for hanging.

artistic crafts

- batik dyeing
  - history
  - materials and tools
  - process

- jewelry and metal craft
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  - materials

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    - technique
    - type of stencils
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    - spattering
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    - finger painting
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batik dyeing

batik or wax resist dyeing has both a long history and a wide distribution around the world. although it is usually thought of as having been southeast asiatic in origin, we know definitely that the process dated far back in antiquity in central america. in central america, approximately four hundred a.d., the peoples of the cuilcuilco-ticoman cultures were using a wax resist process for dyeing both cloth and pottery. (g. c. vaillant, aztecs of mexico). the batik process was also ancient in java, when the first hindu migrations arrived from india.

the three major batik producing areas of the world in order of precedence are java, japan, and southeast india. today only java, of all the early batik producing areas, continues to work in this medium. (is it a coincidence that the great commonality of the three areas is the great abundance of cheap labor?)

the days that java will continue to produce fine batiks are numbered. the chinese have organized that production of batik so that it is no longer a fine ART, but a great industry. japan is becoming more and more heavily industrialized, and is no longer producing batiks in large quantities. this leaves only india, still producing batik of good quality in anything approaching large quantities.

the materials and tools required for batik dyeing are either readily accessible or easily made. a list of essentials follows:

1. cloth: light cotton, silk or linen being most desirable. (all sizing must be washed out and the cloth pressed.)

2. wax, preferably beeswax. (other waxes tend to be too brittle.)

3. dyes: rit, diamond, or any other cloth dye that can be used in lukewarm water. (dyes that have to be used hot are impractical as they will melt out the wax.)

4. stove or hot plate.

5. a "tjanting" or wax applicator: the tjanting may have either one or two spouts, and is easily made from a tuna fish can. a spout is cut from a tin can and is rolled into a cone, leaving a hole about the size of a pin at the small end. a hole is cut near the base of the tuna can and the spout soldered over this hole. a handle may now be attached to the can, preferably at the top. the handle may be located so as to either form a right angle to the spout if the work is to be done horizontally, or to form a straight line with it if the cloth is held vertically.

6. wooden frames to which the cloth may be stretched and tacked while being waxed.

7. two or three water color brushes of assorted sizes.

with these materials it is possible to start to work.

first, the design may be worked out on paper. the cloth is then stretched evenly over the frame, which will hold the work up off the working area so the wax that has soaked through the cloth will not adhere to the surface on which the cloth is laid. the design is then sketched lightly on to the cloth with a pencil. beeswax is then melted in the tjanting. when the wax starts to smoke, the tjanting should be removed from the stove and the wax allowed to cool until the smoking ceases. at this temperature the wax flows freely and yet is not so apt to drip or run. those areas that are to remain the natural color of the cloth are now covered with wax, applied either directly from the tjanting, or by brush. if brushes are used, they should be dipped deep into the hot wax between strokes and allowed to remain there briefly in order to melt the wax that has started to congeal in the bristles. the wax should be used only so long as it is hot enough to flow readily through the cloth. while it is at this temperature and has flowed through, it will appear translucent. when the wax appears to float on the surface of the cloth and is opaque, it is not penetrating and the cloth will have to be rewaxed on the reverse side. this is not desirable as the dye may seep through the cloth and the wax may peel off the surface of the cloth. even with a complete penetration of the cloth, the wax will crack if folded too abruptly. this results in the phenomena known as "crackle". in order to more readily observe whether the wax is penetrating the fabric, it is advisable to have some manner of light source behind the frame. if working vertically this may be done by standing the frame against a window. the stove should be placed as near the working area as possible to cut delay in reheating the wax.

the oriental manner of dyeing is to work from dark to light, covering all the areas not to be dyed with wax, and boiling the wax out of the cloth between dyeings. this, of course, is a long tedious process. in this country the procedure is reversed, and dyeing proceeds from light to dark. this cuts the time required to finish the material, as one just waxes over the most recently dyed area without boiling the wax out of the cloth between applications of dye. however, there are serious drawbacks to this method; first, the wax surface deteriorates with each dyeing, resulting in more and more damage to the earlier waxings with each successive step. secondly, each new layer of dye mixes with the earlier coats so a pure color is no longer obtained.

all told, although the batik process is quite interesting, and some very interesting designs may be done this way, we feel that it is not altogether suitable for use in school. the time element involved is prohibitive, not only the amount of time necessary to arrive at a finished product, but also the time required to achieve any degree of proficiency in the technique.

tools, equipment and supplies for jewelry and metal craft

I. jewelry

a. general equipment and tools

1. work bench or table
2. bench pin
3. small white pan for oxidizing solution
4. potassium sulphide for oxidizing, 1/4 lb.
5. saw frame
6. saw blades - 0 is about medium for jewelry work
7. draw tongs or large pliers for twisting heavy wire
8. small vise
9. round file, 14mm.
10. three square file, 14mm.
11. half round needle file, 14mm.
12. 8"half round file,0 cut
13. 8" half round file, 4 cut (fine)
14. leather mallet
15. ring mandrel
16. planishing hammer
17. raising hammer
18. ring clamp
19. hand drill
20. twist drill, nos. 70, 60, 50
21. chain pliers
22. half round nose pliers
23. flat nose pliers
24. side cutting nippers
25. shears, 7"
26. divider approximately 5"
27. dapping punches and cutters
28. dapping die

b. polishing equipment (motor driven)

1. electric motor
2. lathe splasher, 5" wide, 9" deep
3. pumice, 1 lb., medium
4. medium felt wheel, 3" x 1/2" face
5. brush wheel
6. rouge cake for high polish
7. cotton wheel
8. set emery paper lathe buffs
9. medium emery paper
10. fine emery paper
11. burnisher, 1 1/2" or 2" straight blade

c. hand polishing equipment (if motor is not available)

1. crocus cloth
2. medium emery paper
3. fine emery paper
4. burnisher, 1 1/2" or 2" straight blade

d. soldering equipment (hard soldering only)

  1. where city gas is available

    a. torch, 11" length, air tube 3/32, gas tube 9/32, used with blower or bellows, or
    b. small blow pipe for chain work, used with bunsen burner

  2. where city gas is not available

    a. tank or bottled gas with specially designed attachments, or
    b. blow pipe with alcohol flame
    c. flux - borax, borax slab, or prepared flux such as handy flux for handy silver solders
    d. wire soldering tweezers, 5 3/4"
    e. small brushes for apinting flux
    f. binding wire, 3 sizes - 32, 20, 16b & s
    g. hollow scraper, 2" blade
    h. tweezers, 4 1/2" for placing small pieces
    i. pickle jar (glass refrigerator jar with lid is ideal)
    j. copper pickle pan, approximately 4"
    k. copper tongs for pickle
    l. charcoal, black 3" x 5"
    m. asbestos soldering black
    n. 6" x 6" heating frame and asbestos black to be used beneath it

e. gem setting equipment and tools

  1. pusher, burnisher and engraving tool, or
  2. chasing tool, pitch bowl and chasing hammer, depending upon the type of work and setting.

II. metal craft

a. general equipment

  1. work bench or table
  2. small white pan for oxidizing solution
  3. saw frame
  4. small vise (smooth grip)
  5. large vise (diamond grip)
  6. hand drill
  7. divider, approximately 5" and up
  8. electric motor
  9. torch bench

b. metal working tools

  1. hack saws

    a. keyhole
    b. jewelers
    c. midget

2. metal files
    a. round
    b. half round
    c. 3-square
    d. crossing
    e. knife
    f. flat
    g. square
    h. barette
    i. round edge joint
    j. equaling
    k. slitting
    l. marking half-round, side cut only
3. electric soldering iron
4. blow torches
    a. ritson gas torch
    b. self-generating alcohol torch
    c. gasoline torch
5. scribers
    a. tapered
    b. ball chuck type
6. metal forming mallets
    a. plain
    b. flat faced
    c. rawhide
7. dapping dies
8. dapping punches
9. chasing tools (set of 12 assorted)
10. hammers
    a. ball pean
    b. chasing
    c. raising
    d. planishing
11. metal forming stakes and anvils
    a. mushroom stake
    b. dome anvil head
    c. flat anvil head

c. compounds and chemicals

1. pumice stone
2. tripoli composition
3. rouge
4. asphaltum
5. liver of sulphur
6. yellow ochre powder
7. prepared borax
8. liquid amber flux
9. iron (ferric) chloride

d. raw materials (sheet stock preferred)

1. copper
2. aluminum
3. nickel
4. silver
5. brass

supply houses:

1. Wm. J. Orkin, Inc., 373 washington st., boston, mass.
2. Wm T. Dixon, 32 e. kinney st., newark, n.j.
3. Handy and Harman, 82 fulton st., new york city
4. Paul H. Gesswein, 35 maiden lane, new york city
5. Elcraft, 1637 court place, denver, colo.
6. Sax Arts & Crafts, milwaukee, wis.

textile printing

textile printing is fast becoming an important segment of the high school ART program. it is versatile in that it can be taught as a unit or introduced incidentally as part of other units such as silk screening or block printing.

as a means of artistic expression, textile printing offers the student a chance to combine principles of good design in utilitarian objects. the method and materials encourage experimentation without fear of failure because the process is relatively simple and economical. the material needed will vary with the process used but the two main components of cloth and paint will naturally always be present.

the paint needed for textile painting is specially made for that purpose and can be either oil or water base. in either case the paint will not be permanent on the fabric until it has been set with a fairly hot iron. after the fabric has been printed and allowed to dry for 12 to 24 hours, place a dry cloth over the surface of the design and press for 2 or 3 minutes. (the length of time and the heat of the iron will be determined by the type of fabric printed.) then turn the fabric over and iron it directly on the back side.

oil base paint is often undesirable in the average classroom because of the added cleaning disadvantage in using turpentine. the american crayon company and the sanford ink company put out very fine oil base textile paints.

water base paint is much easier to use because of the facility in cleaning. some fine water base paints are: nu-media by wilson, arts and crafts of faribault, minnesota, aqua tint by the american crayon company, and alpha color mixing medium (a colorless liquid which is mixed with tempera) by webster costello company.

almost any material can be used for printing as the range of processes will fit every texture from terry cloth to silk.

in the following pages these basic processes will be outlined. these will be supplemented with descriptions of other print techniques and materials.

I. block printing

  a. wood block
  wood block, the oldest of the block processes, is abundant, cheap and easy to use.
    1. materials
      a. cutting tools (a simple knife will do.)
      b. brayer and glass.
      c. sealer-shellac.

b. technique

when cutting follow the grain, cut deeply enough and keep the texture of the wood in mind when planning the design.

design can be cut directly from a block to produce either negative or positive shapes. the white line, one characteristic of the wood block technique, looks quite handsome on cloth.

design can also be cut out of wood (balsa) and glued on another solid block before printing. another variation of the wood technique when using balsa is to glue an entire sheet of it to a solid block and cut out your design with a razor. when the block is finished, apply sealer, let dry and roll the paint on with a brayer. as with all of the block processes, make sure there is enough padding under the material being printed.

c. linoleum block

linoleum, though not as easily available as wood, allows greater freedom of design because it is soft and has no grain. the materials are the same as those used for wood blocks except that no sealer is needed.

d. cardboard

cardboard provides many possibilities for experimentation both because of its inherent design quality and because it is so cheap.

1. materials
   a. scissors or single edge razor blades
   b. brayer and glass
   c. sealer and shellac
2. technique

   cut out design in cardboard with scissors or razor blade and paste onto a solid sheet of cardboard or wood. if the cardboard is heavy enough it may be carried into. cardboard is most easily used if the shapes remain rather solid. apply sealer and print as you would linoleum or wood.

e. block variations

1. stick designs

   carve design on end or flat side of stick, paint with brush and print.
2. inner tube

   cut out rubber, paste on cardboard or wood, and print as you would print any other block.
3. vegetable prints

   follow the simple print process but brush paint on vegetable. the vegetable can be anything with a solid, carvable texture such as a potato or carrot.

II. stenciling

stenciling encourages experimentation because paper is quickly cut and there is no great loss if the design is ruined. stenciling is also one of the best processes to use with fabrics of a nubby or heavy texture because the paint can reach all parts of the fabric. this does not mean that stenciling cannot be used on smooth fabrics for the printing range in this medium is very wide.

1. materials

   paper - drawing paper or newprint, commercial stencil paper, waxpaper, soap or jello wrappers.
2. stencil brushes

a. techniques
   if drawing paper or newsprint are used, the design cannot be repeated too often because the paper will tear. this can be remedied by using wax paper which is firmer.

b. after the design has been cut, pin or tape the stencil to the fabric. the stencil brush, cleaned of excess paint, should then be applied to the fabric in short up and down strokes, beginning at the edge of the design and working inwards. the paint can also be applied with a sponge, brayer or fixatif blower.

c. when using more than one color, let the first dry before adding the next unless blending and shading are the effects desired.

III. silk screen

the same silk screen process is used in textile printing as in other kinds of silk screen printing except that textile paint is used in place of regular silk screen paint. the main point to remember is that if a water soluble stencil is used the paint must have an oil base. if the stencil dissolves in turpentine, the paint must have a water base. as a reminder:

stencil	paint
paper	water or oil base
nu-film	water or oil base
direct tusche	water base
tusche and glue	oil base
direct glue stencil	oil base
lithograph crayon and glue	oil base

if any of these methods are new to you please check the brochure on silk screening put out by the ART education class, university of minnesota.

since it has been assumed that the silk screen process is already familiar to you, only a resume of the particular design possibility of each screen variation will be discussed.

a. general printing technique
   it is often wise to have available a metal yardstick to use as a base line when printing with the screen. chalk can also be used to mark off the material before printing. make sure that your screens are properly keyed if you are going to print with more than one screen. this is a particular planning problem if the design is to be of the all-over variety.

b. types of stencils

   1. paper
      this process is well suited to the average classroom since it is inexpensive and easy to use. however, detail is limited as is the number of prints which can be successfully reproduced. if these limitations are kept in mind very satisfactory work will result.

   2. nu-film
      one of the most versatile of the silk screen techniques. it is a technique which often appeals to the high school student because fine detail can be included in the design. if the detail is fine, remember that printing it on rough fabrics will produce undesirable results.

3. direct glue stencil
   this simple negative process will many times result in a fresh looking, rather free design. many kinds of texture can be had with this method which may be combined with another screen process such as nu-film for good contrast in design.
4. tusche, lithograph crayon and glue
   again, these techniques will lend themselves to unusual textures in design. holding sandpaper, a comb or a file under the silk while drawing will give interesting results. when painting with tusche as when painting with glue, try to vary the amount of tusche on the brush in order to give some solid areas and some broken "dry brush areas."

IV. other processes

the three techniques of block, silk and stencil printing are the so called basic processes in textile design. there are many different kinds of processes in textile design. there are many different kinds of processes which are also worth investigating for their novel effects.

a. string painting

dip string in color and place in a desired design on your fabric. place cardboard or part of the fabric over the string. weigh with a magazine or hand pressure and pull string free. this produces a monoprint which can never be exactly duplicated.

b. spattering

use a toothbrush together with your thumb, a comb or a screen. spatter over cut out stencil, leaves, or cutout shapes. interesting shading effects are possible with this method.

c. sponge designs

this process will always involve the texture of the sponge itself as part of the design. the sponge can provide background color. designs can be cut out of sponge or small paper designs can be directly adhered to the sponge if it has been covered with paint.

d. brush painting

painting directly on textiles with textile paint is easy. apply paint with bristle or sable brushes according to the effect desired.

e. finger painting

1. materials

   a. textile paint
   b. piece of glass or other smooth non-porous surface (optional; cardboard with cutout square stencils.
   c. paper toweling

2. techniques

paint is placed on the non-porus surface. designs are then made by the finger painting method. the material is placed face down on the surface, paper toweling is put over and it is pressed. this is also the nature of a monoprint and is used best where only one design is needed. repetition and more control can be had if a piece of cardboard with a cut out square is placed on the surface. this limits the relative size of the finger painting. stencils can also be cut, laid on the surface, and the finger painting will then be in the slope of the stencil design.

f. tie-dyeing

this techniques is particularly successful in border designs although variations can produce everything from stripes to all over designs.

1. material

   a. commercial dye or dye made from adding water to crepe paper
   b. string

2. techniques

the technique is simply one of folding cloth, tying it tightly with string at various intervals and dyeing the cloth. after the cloth is taken from the dye the string is removed. wherever the string binds the cloth the original color will remain. soft edges will result if the string is removed soon after dyeing. if the string remains around the cloth until the entire piece is dry, the edges of the design will be sharp.

objects such as marbles can be tied into the cloth for unusual effects. in the case of the marbles a circular pattern will be the result.

enameling

I. metals suitable for enameling

  a. copper

    1. for general enameling purposes copper is the easiest metal to shape and also the least troublesome in enameling.

    2. copper is the least expensive and the most universally used.

    3. eighteen gauge is the best general weight copper to use.

  b. brass

    1. copper and zinc mixtures of a high zinc content of more than 10 per cent give increasing enameling difficulties.

    2. ordinary brass or high brass has high zinc content and is very difficult to enamel.

  c. bronze

    1. when lead and zinc are added to the composition enameling difficulties develop.

  d. silver

    1. most of the common alloys of silver enamel satisfactorily.

  e. gold

    1. gold and gold copper alloys enamel satisfactorily

    2. if zinc content is too high then there will be blistering.

    3. if the nickel content is too high the enamel will not adhere and flake off the metal.

II. preparing the metal for enameling:

  a. copper must be free of all dirt and grease.

    1. rub with a clean rag that has been soaked in vinegar and dipped in salt.

      a. wash after with water being careful not to put your fingers on it.

      b. if the water does not form in beads or droplets on the surface you can go ahead.

2. you can use an alkali cleaning compound such as dutch cleanser or some other commercial cleanser to clean the copper. use the rubbing method.

3. cleaning of copper can be done by heating the copper to a dull red heat. this burns the grease and oil and oxidizes the metal.

    a. after, slip it into a cleaner or acid solution to complete cleaning and remove oxidation scale.

4. copper can also be cleaned by rubbing surface with fine steel wool.

5. acid cleaning or pickling. you can use either nitric or sulphuric acid. one part acid to three parts water. add acid to water, never add water to acid. pieces are left in solution until they are a bright clean color. (all acid cleaning should be done in a well ventilated room.)

6. prevention of reoxidation can be done by rubbing the piece with a clean cloth moistened with a little gum solution, saliva, liquid detergent, or household amonia.

III. methods employed in the enameling process

a. general procedure

1. brush on thin coat of gum solution or lavender oil on piece of cleaned metal.

2. place metal on clean sheet of paper. dust a fine coat of enamel on surface of metal, using an 80-mesh screen or a piece of nylon stocking attached to top of jar of enamel works also. begin at edge of piece and work in toward center, getting a fine even coat over entire surface by tapping jar gently. be sure not to get any fingerprints on the metal before firing.

3. if lavender oil has been used as the base, the piece can be fired immediately. if gum solution has been used you must wait until piece is dry before firing it.

4. if piece is to be enameled on both sides before firing, use a stilt to rest the piece on while doing other side.

5. with a spatula , lift piece into kiln. dusting method can be repeated on same piece as many times as desired.

b. other processes employed to apply enamel

    1. spatula wet charge - preferred for large pieces.

        a. place small amount of enamel on glazed tile. mix enamel with water, agar, or gum solution until it forms a thick paste. toothpicks, paint brushes, spoons, etc. can be used as tools for applying enamel to surface of metal.

    2. spraying

        a. by adding water to enamel, a fine mixture can be obtained to flow easily through the nozzle of a large orifice sprayer. warm metal on kiln top before applying.

        b. if spray gun is held too close or too far from piece application will not be satisfactory.

    3. painting

        a. fire one coating of enamel on selected shape.

        b. mix water or gum solution into enamel until syrupy enough to flow easily from painting tool.

        c. more than one color can be painted on at a time.

    4. stencil

        a. fire one coating of enamel on metal piece.

        b. make design out of absorbant paper, wet paper, and place on enameled piece.

        c. spray on gum solution

        d. dust on enamel

        e. remove paper with pin

    5. dipping and pouring--for smooth surfaces

        a. mix enamel and water to syrupy consistency.

        b. warm piece on kiln

        c. dipping

            1. hold piece with tweezers and dip into enamel

            2. quickly remove and shake off excess

d. pouring

1. hold warm piece at edge while pouring mixture over surface, making sure enamel is first applied to curves in metal.

2. shake piece gently.

e. support piece on triangle or rim until completley dry before firing.

c. techniques for enameling

d. basse taille

1. designs are carved, etched, or hammered into metal.

2. surface is covered with transparent enamel. other colored enamels can be applied in certain carved areas. final application which has been fired can be stoned under water then placed in kiln for a light firing to bring back gloss.

e. champleve for opaque enamel designs which are to be recessed in carved metal.

1. plan design in which no color areas will touch--some of metal will be left showing.

2. cover metal with asphaltum paint except design area.

3. make solution of one part acid to eight parts water and immerse piece in solution agitating frequently.

4. after design has gone half-way through metal, take metal out of solution and douse in water.

5. asphaltum can be burned off in kiln.

6. fill in carved areas with thin coating of enamel with as many applications as needed to make enamel level with metal surface.

7. stone surface until smooth and lightly refire -- silver of sulfate will darken and polish exposed metal.

f. chaisonne

a design in wire enclosures can be soldered onto a piece of metal. after a couple of firings, enamel will become level with wire design. one simple method requires no soldering. fine annealed wires lay flat on first coat of enamel. enamel applied between the wires holds the wire intact.

g. limoge

enamel covers entire surface of metal. each layer is applied in a thin application with opaque or transparent enamels. shading piece with various colors gives interesting and unique effects.

h. majalica

transparent colors are applied over base coat of opaque colors.

i. plique-a-jour

hard soldered wires on a piece of metal forming filagrees not to exceed more than 1/16" hold an application of transparent washed enamels.

j. sgraffito

1. fire two applications of enamel as base coats on metal.
2. apply contrasting color over this and allow to dry.
3. with sharp object scratch through top coating so parts of base coat will be exposed in a design.

k. inlay

1. fire one base coat on metal.
2. moisten different colors of enamels and lay next to one another on top of base coat in a design.
3. join each color carefully and smoothly together before applying next coat - use a spatula to smooth.

IV. techniques for firing enamel

a. flat ware

when enameled on one side, slide a thin broad knife or spatula under it. have a planche ready on which to place it. be careful not to jar or disturb the enamel. with a pair of tongs or spatula put the planche with the piece on it into the kiln.

b. shaped ware

handling shaped pieces having enamel applied to one side is similar to method above. to enamel both sides of a shaped piece, enamel the inside first then clean the oxide scale off the outside. then enamel the outside the same way the inside was enameled. you can also reverse the order, in this case using stilts with very sharp metal points, or tack set on a flat piece of metal so no marks are left on the piece. to enamel both sides at once requires extreme care in handling. wet all of one surface and after the enamel has been applied, dust on a light spraying of agar ir gum solution. it will set and hold it in place while the enamel is being applied to the opposite side.

c. kiln firing

the kiln temperature for copper is usually 1450° to 1500°f. the time in the kiln is determined by its temperature, the size or amount of metal to be enameled. at first the surface of the enamel looks rough but then it smooths out. when this happens take the piece out and examine the surface of the enamel. if it has not smoothed out put it back in the kiln.

d. torch firing

this enables you to watch the piece. you place the piece on a planche which is wire screen so the heat of the torch can pass through evenly. hold the planche with a pair of tongs or place on a metal support of a type which will permit the torch to be applied directly to the underside, playing the tip of the flame around so the piece is heated as evenly as possible. when the enamel has a smooth glossy appearance the piece is done.

V. procedures employed during the firing process

a. check firing equipment. understand its operation, possibilities and limitations.

b. preheat the kiln to 1500°f. firing chamber will appear a yellow-orange. a pyrometer for reading firing temperatures is good to use.

c. choose a holder suitable to the enameled piece. bare pieces can be placed directly on racks. if enameled on both sides it should be supported by a holder. an enameled surface will adhere to anything it touches during firing.

d. the enameled piece must be warm and dry before it is placed in the kiln otherwise it will crack or blister during firing.

e. place piece as far back in kiln as possible to enable even firing.

f. check the piece after the first minute every fifteen seconds.

g. remove piece when the enamel looks shiny and glossy. inspect it and if it is still rough, return to kiln immediately.

h. place piece on a heat resistant surface to cool.

i. clean oxidation scale off after final firing.

VI. finishing enamel and problems related to cleaning the finished piece

a. finishing

1. to improve edges grind or file them.

2. clean oxidation scale off the back.

b. problems

1. cracking

a. warping of metal is one of the causes usually resulting when too thin copper is used. to overcome this, enamel both sides of copper.

b. too heavy an application of enamel also causes this. use separate firings for each coat instead of one application.

2. blistering and pin holing

a. you cannot escape having a few air bubbles.

b. increased pinholing occurs when heat application is mostly on top.

c. gums and other vehicles cause excessive pinholing.

3. black edges

a. results from not having enough enamel at the edge or overheating the piece in the kiln.

b. this can be overcome by burred or rough edges on the side to be enameled. this keeps enamel from falling away from the edge during application.

c. when black edge develops file after enameling has been completed.

VI. kilns and equipment for enameling.

there are many kinds and sizes of kilns. each has its own advantages depending upon how much you want to spend, and how much jewelry is going to be made. the small studio kiln is perfect for making small pieces of jewelry, but for the more advanced student who wants to make large pieces, the large closed gas or electric kiln is more suitable.

for the classroom situation the more kiln space the better, for it will offer more space for the student to work, and more pieces of jewelry can be made in less time.

a. the studio kiln

this kiln is usually quite small, perhaps 20 square inches of working space. it is most often electric. the kiln should have a cover to allow the holding of heat. the best kiln is the covered coil, this prevents the small pieces from falling into the coils and burning out the kiln. this is more ideal for the classroom situation.

b. the enclosed kiln

this is the large chambered kiln that usually has a closeable door. this kiln is larger and reaches a higher temperature. this kiln is ideal for making larger pieces of jewelry and small bowls etc.

c. torch method

the torch method is a direct flame from a gas or welding torch. the heat is applied to the underside of the metal, when the metal reaches a high temperature the enamel will fuse. the metal is usually placed on a wire screen so that the torch can be worked under the metal.

d. tools and equipment

the tools needed for enameling and making metal jewelry are easily obtained and can be found in most workshops. the following list should include all the tools necessary to complete simple jewelry.

1. spatula turner, this is used for lifting the jewelry from the kiln when it is hot. this is essential.
2. small sieve or loose knit cloth for sifting on enamel. (a piece of silk stocking works nicely)
3. hack saw, very important for cutting the metal. a jewelry saw is much better but not essential.
4. tin snips, a must for cutting metal.
5. pliers and tweezers, for bending and picking up small pieces.
6. files and steel wool.
7. paint brushes, needed for cleaning and applying gum.
8. soldering iron.

pottery

ceramic pottery

- definition
- aims of unit
- identification of different wares
- glossary
- the process
- judging your work
- materials and techniques

plaster

- history
- carving
  - materials
  - casting
  - waste molding
  - chipping
  - tinting and finishing processes
- casting a low relief panel
- piece mold

sculptors and their work (local artists)

ceramic pottery

pottery has been spoken of as "the most ancient and noble of crafts." a study of pottery involves research in history and technical processes as well as ART. pottery in its broadest meaning includes all articles made from clay and fired. the term ceramics, includes everything that comes from the potter's hand, from the crudest earthenware vessel to the most exquisite porcelain vase.

the ART of ceramics is divided into two main classes. (1) pottery is composed of various kinds of baked clay with which sand, chalk, and other substances may be mingled. pottery or earthenware was made by man in the early stages of civilization all over the world. (2) porcelain, a later development, includes all articles produced by the mixture of certain mineral elements, commonly referred to as china clay (koalin) and china stone (feldspar). pottery is opaque and when broken shows a rough granular surface; porcelain is translucent, breaking with a smooth fracture.

the process of making clay into pottery was probably the first form of handicraft, with the exception of the fashioning of flints and weapons. in the early stages of civilization, the primitive peoples made clay jars and vases, not for flowers, but for household and ceremonial uses. the history and customs of prehistoric races existing in different parts of the world are revealed to us through fragments of pottery unearthed from ancient ruins.

aims of unit

- to develop a true appreciation for good form, color, and design to the end that better taste may be employed in making selections.
- to present the craft of pottery making as an interesting handicraft rather than as a commercial enterprise. such an aim should impart a respect for the potter's craft as an expression of creating ART.
- to teach some underlying truths about the pottery craft as practiced by the various peiples of the world at different stages of civilization, emphasizing those periods in which it was most beautifully developed.
- to learn and practice skills and ART principles involved in using ceramic materials.

ceramics is one of the most exciting materials you will be studying. it can be as complicated as mass producing kitchen sinks to a science research center using difficult chemical and physical formulas to make rocket nose-cones or as simple as a primitive indian shaping a bowl out of a handful of mud. clay is the term generally applied to the natural material as it comes from the earth. after it is dug up, it is usually weathered in the open, dried and broken up, and the foreign matter picked out. it is then thoroughly ground in water to a finely pulverized state and passed through a succession of sieves until all foreign matter and impurities are removed. it is then the consistency of cream and is called "slip." during the grinding, proportions of fine sand, feldspar, or feint may be added. the proportions and kind of ingredients determine the sort of ware to be made. the modern method of preparation is to force the slip through a series of straining bags which remove most of the water and leave it stiff enough to work. natural clays are of various grades according to their chemical properties and range from the pure white used in making porcelain to the red, buff or gray.

identification of different wares

the various pottery wares may be classified into three kinds:

a. stoneware - coarse grades. thick, heavy, poorly glazed, or without glazing. examples - jugs, crocks, etc. no light can pass through this ware.

b. earthenware - a higher grade than stoneware. it includes most of the tableware in general use. it is made of good material, well-glazed, and often beautifully decorated.

c. porcelain or china. finest and most expensive. translucent. the secret of porcelain making was developed in the orient and held there for centuries. artificial porcelain was produced in venice in 1519 and later in ferrar and florence. in general, the oriental styles and colors were merely imitated in tin-glazed falence. this was done with much success in the little town of delft, holland. for a certain period, holland was the only european country that conservative japan allowed to enter her ports. in 1709, the secret of genuine porcelain was discovered in dresden by the director of a factory at meissen. in spite of precautions to keep the process of manufacture secret, it was not long before they were betrayed by workmen who went to neighboring states and there established factories. factories at meissen and seures were the most important in europe during the eighteenth century.

d. not known as pottery but made of clay are such items as: bricks, wall and floor tiles, drain pipes, bathroom fixtures such as sinks and bathtubs, and electrical fixtures.

making

pottery making is one of the oldest of the ARTS known to man. the earliest men were fascinated by the feel and moldability of clay and began fashioning it into small cups and containers. one theory of how man stumbled into the idea of firing clay to make it more durable is that they used clay containers for cooking. then a container fell into the fire. it became much stronger and harder when the fire was put out and the container taken from the cooled coals. nearly every culture of the world does or has made pottery, perhaps because the materials for pottery making are so universal, but the cultures that went the farthest into pottery as an ART are the chinese and japanese. pottery making was closely tied in with the religion of these ancient cultures. the beauty and diversity of their tea bowls, tea pots and other ceramic ware shows the religious care they took in making them. we can learn much even today from chinese and japanese potters about the preparation of clay, methods and techniques in throwing, and glazing.

glossary

some of the terms used may be unfamiliar to you.
become familiar with the following:

slip	clay mixed with water
grog	fired crushed clay
wedge	to work lumps out of clay
greenware	clay that is too dry to shape
bisque	clay that has been fired
leather-hard	clay that has not been fired but is partially dry
incising	cutting into the clay
inlaying or (mishima)	filling the incising area with engobe
sgraffito	scratching thru to the clay beneath
wax resist	wax liquid painted on a pot in a design to prevent the glaze from sticking
engobe	colored slip
underglaze	coloring pigment put on under a clear glaze
glaze	powdered glass and chemicals used to cover pot to give color, gloss and to make it waterproof

the process of making pottery

there are in museums many large unglazed pots which were made before the potter's wheel was known.

vessels are fashioned entirely by hand or in molds, or by the use of both the hand and the mold. only a few tools are employed. the potter's wheel is horizontal disc which may be turned by crank, pedal, or by power. the speed is regulated to suit the convenience of the worker. with moist hands, he shapes the soft clay mass into a form as the wheel revolves. if a hollow vessel is desired,he shapes the clay into a cone, then by pressing on the apex with his thumbs or finger, forms an opening within as the wheel revolves. finishing touches, such as incised design or low relief design, are applied with tools of wood or of leather while the form is still moist. the object is then placed aside to harden before being put into a kiln for firing.

without wheel: coil method: roll moist clay between the palms of the hands until it is long, round and about 1/2 inch thick. form the base of the piece with a roll; join ends carefully to avoid air pockets. run a second roll on top of the first. join the ends at different points so that the joints will not be above one another. continue with the third and fourth rolls, and so forth, to the desired height. coils should be welded on the inside of the piece in an upward motion, and on the outside in a downard rubbing motion.

slab method: flatten lump of clay by pressing with the hands; then use a rolling pin until clay is of an even thickness. for an object about six inches high, a fair thickness is three-eights of an inch. cut the slabs as wide as desired, and stand one in position for the base; join the ends. in this method, slightly stiffened clay sometimes seems to stand better without sagging. in adding the next slab, slip (a thin mixture of water and clay) should be used if the clay is rather stiff. it is applied to the ends before joining and to the layers of slab, as they are placed on top of each other. as in the coil method, the joints should not be placed in a vertical line upwards, as this is likely to cause sagging.

when these construction methods are applied to sculpture, it is wise to have the design of the piece to be made carefully planned. then, as the building process proceeds, the student may shape his coils or slabs by pushing and bending according to his design. sculpture with a thickness of three inches or less need not be hollowed. larger pieces tend to crack or explode if they are build solid; however, they may be built, cut hollowed, and re-assembled, with slip.

firing

clay hardened by drying will again absorb moisture. to prevent this, it must be heated at a high temperature. after the pottery has hardened by slow drying, it is placed in the kiln and heated to a white heat. then it is allowed to cool, slowly, before being removed from the kiln. when taken from the kiln after a first firing the articles are known as "bisque" ware.

even when such indicators are in operation, most ceramicists use cones to guage accurately the increase of temperature. usually, two or three cones (segar or standard cones), are placed in the kiln in a position clearly visible through the spy hole. such cones are composed of materials which react to specified temperatures, but only after they have been subjected to the pre-determined heat for a certain length of time. they react by bending like a candle in the sun. the person firing chooses cones whose numbers indicate the heat control desired for the clay being fired. one of the cones should indicate that the kiln is approaching the degree of heat required for the firing of the objects within; the next, that the required degree of heat has been obtained; the third should show that the kiln has not been overheated by remaining erect. a table showing cone numbers and the corresponding temperature degrees can be found in pottery, by cox macmillan co. information as to the firing temperatures of the clay should be available from the supply house which the school uses. companies such as amaco and the l.h. butcher co. publish detailed brochures on their products, indicating corresponding cones and glazes. their materials are inexpensive and appropriate, and technical information regarding glazes may be procured from your supply house or by writing to the company directly.

in loading the kiln, one places the supports and shelves in position so that no piece touches the sides or bottom of the kiln and so that as many objects as possible can be fired at once. bisque pieces can be placed on top of each other and touch each other. glazed objects, however, should be placed on stilts with about 1/2 inch leeway from each other. glaze and bisque may be fired together if the temperature demands are the same.

glazing

this process consists in coating the ware with a substance which when fired, gives a surface finish. various substances are used, namely, lead oxide, powdered feldspar, etc. the glaze is ground to a very fine powder and mixed with water. the glaze is evenly distributed over the ware. the water is either absorbed by the ware or evaporated, leaving a thin coating of glaze which must be fused by heat; thus a second firing is necessary. the temperature in the glazing kiln is raised very slowly and baked. firing changes the glaze to a transparent gloss, which brings out clearly any designs placed on the ware. color effects are produced by coloring the glaze, some glazes are opaque. use care when using glazes. they contain a high percentage of lead which is very poisonous. use only glaze brushes for glazing. never put brush or glaze or fingers in your mouth! always wash your hands, the brush, and the water pans after you have worked with glaze. be careful not to get any glaze on the bottom or foot of your ware. spilled glaze can be chipped from the muffle (kiln interior); however, a solution of kaolin and flint (50% of each plus water) will keep objects from sticking to old glaze spots. this solution, called kiln wash, also makes the removal of new spots easier.

the kiln must be allowed to cool before it is opened; about twelve hours will do the trick. the pieces will still be very hot, but if you are anxious to examine the results immediately, bisque can be removed with asbestos gloves or toweling. glazed objects, however, must be allowed to cool completely in order to avoid carcking (minute surface cracks.) in a glaze firing, it is advisable to keep the kiln closed until the temperature drops to room temperature. some bisque-fired sculpture is very pleasing as is, especially if the clay has brown or reddish tones which will stand up to dust and handling. if such is not the case, a wax finish is often satisfactory. johnson's pastewax can be applied clear or mixed with oil paint and buffed after it is set. it will give protection and color (if mixed with oils) to a rough texture, and a sort of glow to smooth surfaces. if a stronger, more even color is desired, oil and turpentine may be applied to the bisque. after about 48 hours, wax may be added and buffed. this finishing method, however, tends to produce a rather high shine, or reflective surface. another finish for ceramic sculpture is a glaze, which is quite a subject in itself. therefore, we will touch only lightly upon it, with the following remarks:

1.) transparent glaze produces a smooth, glassy finish; matt glaze, a dull finish; glaze mixed with borax, a mottled finish. if glaze is used, it should be in keeping with the feeling and handling of the piece as sculpture. as a general rule, glassy surfaces tend to detract from the visual image of the forms.

2.) glaze can be applied by brushing, dipping or spraying with a common insecticide sprayer. it should be applied evenly on a surface free from dust or oil from the hands. a sufficient amount has been applied when the piece has the appearance of an even stiple; it can be tested as about a 32nd of an inch. this result can be achieved through several coats. pieces to be glazed should be placed on stilts, coated, and put in the kiln with the least handling possible. the bottom surface should be free from glaze.

3.) more definitive information on glazes can be obtained from manufacturers, publications to be listed, and posters, who have first claim on this phase of ceramics.

students usually choose an animal or a single human figure for their first efforts. when they go on to a second project, the teacher may want to suggest:

1) a head or other hollow form using the slab or coil method

2) a group of two or more figures

3) an abstraction using design concepts formerly introduced.

at this juncture, students often enjoy seeing sculpture in museums, local exhibits, and shows. for example, the syracuse museum of fine arts sends a traveling exhibit from its "ceramic national," which has appeared at both the minneapolis institute of arts and the university galleries. ceramic and other sculpture has received good coverage in "life" and other popular magazines during the last few years. some other publications more specifically concerned are "craft horizons" and "ceramics monthly."

judging your work

in judging what you have done you should ask yourself these questions:

1. how well does the pot fit its purpose? if the pot is a container, how well does the lid fit? do the handles fit your hands or fingers? if it is a pitcher, how well does it pour? - etc.
2. how well are the parts organized? is it a pleasing shape? do the decorations make the pot more beautiful or do they look awkward? does the pot appear to float on the desk or does it have a heavy squat look about it?
3. does it look as if it is made from clay? clay is able to do certain things and has qualities which belong to itself. your pot should look as if it is made from clay.
4. does your pot display good craftmanship? did you hurry through this project because you had to do it or did you take pride in your work and finish it as well as you were able?

if you have carefully followed these rules you can be more proud of owning it, than of owning a mass-produced commercial-piece.

ceramic materials and techniques

definition of ceramics, according to the american ceramic society:

the term "ceramic" is a transliteration from the greek adjective "keramikos", derived from "keramos", meaning "fired stuff." ceramics are products manufactured by the action of heat on materials of an earthy or non-metallic nature in which the oxide of silicon and the compounds thereof (silicates) predomintate.

I. materials--a ceramic ware, such as dinnerware or ARTware, consists of two phases, the major portion which is the body and the surface coating which is the glaze.
  a. body--the body consists of a mixture of clays, flint, and felspars.
    1. clays--clays are the product of the decomposition of felspathic rocks and consist chiefly of hydrous aluminum silicates with varying amounts of other minerals and some varieties of organic matter.
      a. classification -- clays are classified according to their geologic occurence as residual clays (occurring in the place where they were originally formed) and as secondary clays (transported by water or air).
      b. properties--properties of clay important to the manufacture of ceramic ware are workability or plasticity when mixed with water, that is, the ability to be molded and to retain form; and hardening under the influence of fire, that is, the tendency to vitrify and become impervious to weathering.
      c. clays important to body mixes
        (1) kaolin--kaolin is indispensable for the production of a white sequent high fusion point. it is the most refractory of all clays. like most residual clays, it is "short," that is, it has little plasticity when wet.
        (2) ball clay--ball clays are secondary clays and as such are very fine grained, plastic and tough. when mined, they may be white, pink, gray, blue, tan or black in color. since ball clays have proportion of fine grained material, they generally require more water to make them workable; thus there is a slower rate of drying and a greater shrinkage, with a consequent tendency to crack during the drying stage. the chief function of ball clay in pottery bodies is that of a binder andof imparting the necessary plasticity to the mass.
    2. feldspars--feldspars are silicate minerals which are alkali aluminum silicates, alkali earth aluminum silicates, or a combination of the two. they are found in practically all igneous rocks throughout the u.s. and canada. usually between 13% and 16% of the body of earthenware isfeldspar. it aids in the vitrification, tending to prevent the deformation of bodies in which it is used; it has an important influence upon the color of the body; and it also aids the porosity of the unburned clay.

3. flint or silica--this is the most important constituant of the ceramic industry, and is known in the trade as sand, silica, quartz, or flint. silica is usually added to the body mix in its powdered form, flint. it reduces shrinkage in drying and during firing; it aids in imparting porosity during drying; and it gives the body a certain rigidity during firing, opposing deformation due to softening.
4. talc or steatite
   talc is a hydrous magnosium silicate, found in north and south carolina, new york, california and a few other states. talc is a bonding material which may be introduced into the body mix in considerable quantities at the expense of the clay content without affecting the working properties of the body. it has a decided influence towards promoting the translucency of the ware; it promotes vitrification in the body; it increases the toughness of the ware; and because of its low coefficient of expansion, it increases the resistance of the ware to thermal shock.
5. distinction between pottery bodies--pottery is divided into three classes: earthenware, stoneware, and porcelain. distinction is made on the basis of the body compositions and the temperatures at which they are fired.
   a. earthenware--earthenware is the largest class of pottery and covers all natural clays or mixtures of natural clays, which may fire red, buff, yellow, gray, or white. Usual temperatures of firing fall between 2000° and 2300° f. the earthenware body, after the first firing and before glazing, is dull, opaque, porous, and soft enough to be scratched with a knife. if an earthenware piece is broken after it is glazed, the glaze can be seen as a distinct layer adhering to the body surface. very little penetration of the body by the glaze occurs.
   b. stoneware--stoneware bodies are composed of a plastic clay containing a high percent of sand, consequently they need not be a mixture of clays as with earthenware or porcelain. stoneware is also a refractory clay which burns to a dense body, the temperature of firing falling between 2300° f. and 2450° f. the stoneware body after after firing is hard, dense, opaque, vitreous, and cannot be scratched with a knife. unlike earthenware, stoneware is one-fired: the bisque and glaze are fired at the same time. if a piece of stoneware is broken after firing, the glaze appears incorporated with the surface of the body rather than as a distinct layer.
   c. porcelain (china)--porcelain bodies are distinguished from earthenware by being non-porous and glasslike in appearance, rather than porous and dull. porcelain bodies are distinguished from stoneware by being translucent in thin sections, rather than opaque. the body would be perfectly transparent, like glass, were it not for the fine granules of kaolin embedded throughout. if a piece of porcelain were broken, the glaze appears incorporated with the surface of the body rather than as a distinct layer, as is also the case with stoneware. usual temperatures of firing fall between 2390° f. and 2570°f.

b. glaze--the glaze is a glassy coating used to cover the clay body, making it impervious to moisture and decorating it. since glazes have silica as the characteristic ingredient, it may be said that a glaze is a solid solution of a series of silicates, plus the coloring oxides.
   1. composition--the most common glaze materials are silica or flint, clay, feldspar, borax, lime or whiting, lead, tin, and zinc.
      a. silica--silica is the main ingredient in glazes, varying from 25% to 75%. by increasing the silica content, a glaze acquires the property of devitrifying easier, and by decreasing the silica content, a glaze loses its viscous nature.
      b. clay--clay always introduces both silica and lumina into the glaze. alumina prevents devitrification of glaze.
      c. feldspar--feldspar makes the glazes more clear and transparent and gives special colors to metallic oxides.
      d. borax--borax makes the glaze harder and more brilliant, and acts upon the color of certain metallic oxides.
      e. lime or whiting (calcium corbonate) it has a tendency to cause the formation of crystals and it makes a fusible glass.
      f. lead--lead is much used to increase fusibility. it has a slight tendency to cause crystallization, and acts on the coloring of certain metallic oxides.
      g. tin--tin does not form a transparent glass but remains suspended in the glaze, making it opaque.
      h. zinc--in addition to imparting opacity to the glaze, it often modifies the colors of other metallic oxides.
   2. classification--glazes may be classified by their state before firing, by their temperatures of firing, and by their visual effect after firing.
      a. before firing
         (1) salt glazes require no special preparation. they are applied while the ware is in the kiln by throwing a quantity of common salt into the firebox near the end of the burning period. the salt vaporizes and decomposes on contact with the furnace gases to form sodium oxide. salt glazing usually produces a pitted surface effect. it is most frequently used on stoneware, which is well adapted to one-fire methods.
         (2) earthy glazes consist of bodies insoluble in water. the actual glaze compound is not effected until the ware is fired.
         (3) fused or fritted glazes are prepared in a sintered, or completely fused mass and then ground to a powder for application on the ware. by such pre-fusion, materials that would otherwise be soluble in water can be incorporated into the glaze and a high degree of uniformity obtained. fritted glazes are more expensive to prepare, but they are more convenient to apply and safer to handle.
      b. at the time of firing
         (1) hard glazes are those which mature at higher temperatures and contain less fluxing material.
         (2) soft glazes are those which are fusible at low temperatures and which ordinarily contain a considerable amount of lead.

c. after firing

(1) matt glazes are those which appear dull; bright glazes appear high in glossiness. matt glazes are not underfired nor are they deadened by acid or sand blasting.

(2) crystalline glazes, as distinguished from non-crystalline glazes, show a crystalline structure ranging from large to microscopically small. true matts are of the microscopically small type.

(3) crackled glazes, those netted with threadlike cracks, are produced by controlling the extent of crazing of a glaze, ordinarily a defect which shows poor fit between the body and the glaze. chinese crackles were often further accentuated by rubbing stains of a contrasting color into the cracks.

(4) real metallic lusters are formed when an overdose of a metallic oxide is given the glaze and the glaze is slightly reduced in the firing. the true metallic luster is permanently part of the glaze and impervious to weathering, while the fired-on lusters are not.

3. influences on colorants--the colors given for various oxides are subject to modification by several factors.

a. the temperature of firing may change the color to be had from an oxide.

b. the atmosphere of the kiln may change the color of an oxide under reduction (that is, with a deficiency of oxygen in the atmosphere).

c. certain colorless materials present in the glaze or in the body may change the color of an oxide.

d. the reciprocal action that metallic oxides have on each other may change the color to be had from one of them separately.

II. prepartation of materials--ceramic materials are either quarried from open pits or mined from underground. the raw materials must then be refined, mixed, and combined with water to prepare them for forming into ware.

III. forming methods--the methods of forming ceramic bodies into ware are determined by the percent of water present in the body.

a. forming with slip clay

1. slip casting--casting is a method of forming in which clay slip takes a shell-like impression of a plaster mold.

a. plaster of paris is the material most commonly used for pottery molds. the characteristic of plaster important to the making of pottery is its power to absorb moisture from the clay. because of the possibility of reproducing innumerable duplicate pieces by absorption in plaster molds, pottery making ceased to be dependent on the skill of the individual potter and became a mass production industry.

b. the process of making a plaster mold for casting involves several steps.

(1) the model of the article to be made is shaped by hand or tooled on a wheel from clay, wood, plaster, metal, or a plastic. it is usually made about 10% larger than the finished ware is to be, to allow for shrinkage in drying of the clay and firing.

- (2) the block mold is made from the model. first the model is thoroughly sized or coated with a special soap; then it is surrounded with a cottle (a metal, linoleum, or leather collar; plaster is poured over model and allowed to set up; the mold then is smoothed off level in circular or rectangular form.
- (3) the case mold is made from the block mold. the outside of the block mold is well sized with a solution of soap and tallow to render the plaster surface non-absorbent and give smoothness. the model is removed from inside the block mold and the inside of the block mold is also sized. plaster is poured into the block mold, and then around the block mold to give the corresponding outside shape. this mold is the case mold from which the working molds are made. the block mold is preserved so that if the case mold breaks or wears away, the case mold can be renewed.
- (4) the working molds are replicas of the block mold, and are made by the same process of sizing and casting plaster. after the working molds are thoroughly dried, they are ready to be used for slip casting.

c. pouring into plaster molds
  - (1) clay slip is poured slowly and at a uniform rate into the dried plaster mold
  - (2) the slip is allowed to stand at least 1 hour in the mold, depending on the character of the slip used and the thickness of the cast desired.
  - (3) the excess slip is drained off, leaving a clay shell in the mold.
  - (4) when the piece has set up and is partially dry, it is removed from the mold and put to dry out completely or is kept moist for the attachment of any added parts such as handles or for decoration in the green state before firing.
  - (5) trimming off of ragged edges is also done at this stage before the clay begins to dry out.

2. attaching separately formed pieces--slip clay also acts as a binding medium to join together pieces of clay with less moisture, usually in the leather-hard state. slip is used for attaching handles to articles not completely finished in the mold or on the wheel or on the jigger; also articles which are too large or too complicated to be formed in one piece can be made in two or more pieces and the parts joined together with slip.

b. forming with wedged or pugged clay-- when clay is in the moist state, containing from 20% to 40% water, it can be formed into ware by pulling and pressing the clay into shape, by adding separate pieces of clay to each other, or by cutting away from the clay.

1. hand methods of forming
   - a. clay may be rolled into cords which are coiled one above another and welded together by rubbing or pinching to form the wall of an article.
   - b. clay pinches may be used instead of coils, the morsels being wetted and pressed one against another. the effect is freer than with coiling, and the walls are generally thicker.

c. slabs of clay rolled flat may be erected and joined together with slip clay. rectangular or flat sided shapes are usual with this method.

d. flat slabs of clay may be hand pressed into molds to form ware.

e. throwing on the potter's wheel is the main hand method of forming. the usual studio wheel today is a kick wheel. the wheel head is set at the top of a spindle, and in the upright shaft is a crank to which is attached a horizontal treadle. this is worked continuously by foot while the hands have free play to center and shape the piece on the wheel head. power wheels, which eliminate the kicking to obtain momentum, are now in wide use, but the essential technique of throwing on the wheel remains the same as it was thousands of years ago. a ball of wedged clay is thrown on the revolving wheel head, centered through pressure of the hands, and worked up and down until the clay responds easily; keeping the hands always wet so that the clay may slide easily beneath them, the clay is gently urged outward to create the interior hollow of the article, and then raised to the desired height and even thickness of wall through the continued gentle pressure of the fingers; the contour is perfected, the rim is finished off, and the piece is removed from the wheel to dry to the leather hard state.

f. turning is a method used to complete and perfect shapes which have been first established by throwing on the wheel or by pressing. any piece which has been wheel thrown must still have the foot, or base on which it rests, fashioned by turning. for this, the article is inverted on a wheel and the excess clay shaved away with hand tools, leaving a rim on which the weight of the piece will rest.

2. machine methods of forming

   a. jiggering is the process of forming ware by machine most commonly used in making dinnerware. the jigger consists of a spindle provided with a head into which the mold is fitted, and a counter balanced arm that swings up and down, attached to a support behind the revolving mold head. this arm carries a tool holder and a tool consisting of a steel templet, the outline of which corresponds to the profile of the ware to be shaped, and which comes to rest slightly above the spindle head. in flat work such as the making of plates and saucers, the plaster mold forms the face of the ware while the steel tool or profile forms the back or interior of the ware. in hollow ware, such as cups and bowls, the mold forms the exterior of the piece and the tool forms the interior. by placing a sheet of clay firmly upon the revolving mold and lowering the tool to cut off the excess, the desired shape is quickly produced. when the piece is formed, the mold is removed from the head of the jigger and placed in the dryer; a fresh mold is set into the jigger head and the process repeated.

c. forming with semi-dry clay.--dry pressing is a forming process which consists of introducing finely powdered clay into steel molds and subjecting it to pressure. the term "dry pressing" is slightly misleading in that the materials may still contain up to 10% moisture, just enough to hold the body together when pressed. from 550 lbs. to 1500 lbs. pressure per square inch is usually applied to cause interlocking of the clay particles. one of the chief advantages of the dry press process is that it permits ware to be formed from material which is low in plasticity. there is less need to age the clays previous to forming, since plasticity is of little importance; the need for a drying period before the ware can be fired is eliminated; and dependence on plaster molds which must be dried out and frequently renewed is done away with. because the clay is practically dry, there is a minimum of shrinkage; and for this reason dry pressing is used extensively in the manufacture of electrical porcelains which must conform to close tolerances.

IV. preparation for firing

a. finishing of green ware.--the pieces as they come from the mold or the wheel must be finished off by removing any rough spots or mold marks and by smoothing the surface. this may be done by sanding the ware with fine sandpaper, by brushing either by hand brush or air brush, by sponging or rubbing the surfaces with a wet sponge, and by flanneling or rubbing with a piece of heavy flannel.

b. drying the green ware

1. air drying was the primitive method of drying clay in the open air without the aid of artificial heat. it is one of the most severe treatments to which clay is subjected, since the drying conditions of the atmosphere vary widely from day to day and there is no chance to control them. too rapid drying causes loss of ware through cracking, while too slow drying causes loss through popping of ware put too wet into the kiln. by artificial drying moisture is removed with the greatest possible speed at the lowest cost and the greatest safety to the ware. periodic dryers are ones in which the ware is placed, left until dry, then removed and other ware placed therein; the humidity is controlled as is the temperature and the velocity of the air. progressive dryers are ones in which the ware moves, usually through a tunnel divided into several zones; the first zone is the heating up or high humidity zone, then the first drying zone, followed by the second drying zone, and finally the cooling zone. the most recently developed method of drying is that by radiation from infrared lamps. infrared cuts down drying time to about 1/8 the former time. i.e. a china plate is dried in 15 minutes by infrared as compared with 120 minutes by former methods. any factors which save time and loss of ware are of great importance in mass production, and the drying period has been one of the most critical stages in pottery manufacture.

c. stacking of green ware. -- stacking is the process of arranging the finished ware for firing in the kiln.

1. for the bisque firing -- when the kiln chamber is open to direct contact with the flames and gases of combustion, the ware must be protected by enclosure in saggers, which are specially formed fire clay containers. saggers are not necessary when firing in a muffle kiln or enclosed chamber which in itself protects the ware from the flames, nor in an electric kiln where there are neither flames nor gases of combustion, nor is it necessary with certain sturdy earthenware bodies or stoneware. porcelain, with the greatest tendency to deform in firing, is often bedded in sand or flint and each bedded piece placed in a separate sagger. semi-porcelain wares are not generally supported in sand unless there are protruding sections, such as wide flat rims on plates, whose weight would cause sagging. bodies not fired to vitrification, such as earthenware, will as a rule hold their shape without sagging, and no special care is needed in placing them in saggers; they may be stacked one on top of another, several pieces in one sagger.
2. for the glost kiln-- stacking for the glaze firing is more exacting since the ware is then covered with a thin coating of raw glaze, which can be scratched or flaked off in its unfired state, or which can melt and merge with another glazed piece in the firing if they should be placed so as to touch. separation of glazed pieces from each other and from the sagger walls is accomplished by the use of stilts, pins, spurs and thimbles, which are supports of a refractory material with fine points on which the ware rests. in the case of fine china, each piece rests on its own foot which has been wiped clean of glaze. thus porcelain will usually evidence no stilt marks but will have a unglazed foot, while earthenware may have a glazed foot but will show slight marks where the glaze came in contact with the supporting points. saggers for glaze firing are usually coated thinly inside with glaze, so that none of the ware will be robbed of glaze by volatilization and transfer to the sagger wall. the bottom of the sagger or the bottom of the chamber in a muffle kiln is covered with sand or flint so that any droppings of glaze will not adhere to the floor and spoil it for further use.

V. firing

- a. principle of firing. -- firing or burning is the application of heat to effect the fusion of ceramic materials into a dense compound of varying degrees of vitrification.
    - 1. bisque firing. -- bisque, or biscuit, firing is the burning of green ware before the glaze is applied.
        - a. during the water soaking period, the temperature is raised slowly so as to drive out the remaining pore water from the ware. bone dry ware from the dryer may still contain 1 1/2% of moisture in the pores. if the kiln is rushed at the beginning excessive loss from cracking or popping may result.
        - b. the dehydration period follows after water smoking, in which the temperature is raised, still slowly, to drive out the chemically combined water which is part of the clay molecule.

c. during the oxidation period, there is direct combination of carbon in the clay with oxygen in the air to form the gases of carbon monoxide or carbon dioxide. to accomplish oxidation of the clay, the temperature must be held for the time being and plenty of air must be introduced into the kiln. the clay at the end of the oxidation period is very porous and of low mechanical strength. after the oxidation period, the burning can proceed rapidly without much danger.

d. the vitrification period follows, during which there is a contraction and filling up of the pore space in the clay mass. clays burned to complete vitrification show a smooth fracture with a slight luster. the attainment of this condition also represents the point of maximum shrinkage.

e. during the soaking period, the temperature is held to complete the fusion of the clay particles.

f. the cooling period is that of gradually reducing the temperature before the ware can be removed from the kiln.

2. glaze firing. -- glaze, or glost, firing is the burning of bisque ware to which a glaze has been applied. the object in glaze firing is to melt the glaze and establish a perfect union between the glaze and the body.

a. the glaze firing is usually carried on at a lower temperature than the bisque and ordinarily requires less time, since the ware now contains only the small amount of moisture which the piece has absorbed when being glazed and which may not have been completely evaporated in the dryer. there is therfore little danger in glaze firing of cracking or other defects which are liable to occur in the earlier stages of bisque firing.

b. the cooling period is more important in glost firing than in bisque firing, since such defects as crazing may be caused by too rapid reduction of temperature.

c. in the case of hard porcelain, the glost firing may be carried to a much higher temperature than the bisque, so that the body and the glaze mature together.

3. one-fire burning. -- in one-fired work, the glaze is applied to the ware in the green state and both the body and the glaze are fired simultaneously. this method of firing is more common in the manufacture of electrical porcelain, tiles, and ARTware than in the manufacture of dinnerware which is ordinarily one-fired.

b. kilns -- a kiln (pronounced "kill") is a furnace or oven in which clay products are burned.

1. periodic kilns. -- a periodic kiln is one is which a load of ware is set, fired, cooled, and removed, to be succeeded by another separate load. periodic kilns may be of two general types, open or muffle. in an open kiln, the flames pass through the firing chamber and the ware is exposed to their action as in the firing of stoneware and brick, or the ware is placed in saggers to protect it from the flames. in a muffle kiln,there is a closed chamber or muffle which is surrounded by the flames but not entered by them. no saggers are necessary to protect the ware in this type. the waste of heat is high in a muffle kiln, so it is used only for small capacities or where the value of the ware warrants. most present day studio kilns are of the muffle type.

2. continuous kilns. -- a continuous kiln contains a varying number of compartments which are burned in succession, making the operation continuous since there is always a chamber cooling a chamber of fire, and a chamber being heated up from the heat given off by the other two. the main idea is to utilize as much of the heat of the waste gases and of the cooling ware as possible. there is no cessation of the firing operation in a continuous kiln as there is in a periodic kiln, so that they are more economical both of time and of fuel.
3. tunnel kilns -- a tunnel kiln is one which moves the ware to the heat, unlike a continuous kiln which moves the heat to the ware. the general principles in the operations of the modern tunnel kilns are to maintain a time-temperature curve in a comparatively narrow tunnel, usually between 200 and 400 feet in length, through which the ware moves on cars. there are three distinct zones in the tunnel, the pre-heating, the high fire, and the cooling zones. in general, there are two types of tunnel kilns, muffle kilns and open fire kilns. the tunnel kiln, with its many variations, is increasingly becoming the firing method most used in the american industry. it is well suited to standardization and mass production of ware. the kiln is the most essential piece of equipment of any pottery, large or small, and the designs for kilns are innumerable.

c. heat measurement. --the kiln heat, obtained from wood, gas,oil,coal, or electricity, must be measured in order to control the time and temperature of the firing.
   1. the primitive methods of measuring heat were to judge the heat of the fire by the naked eye, and to draw trial pieces to sample the condition of the ware at various stages of burning.
   2. pyrometric cones are the main measuring device used by present day studio potters. they are also used in industrial practice in conjunction with other scientific instruments. pyrometric cones are small triangular pyramids numbered in the order in which they will deform when subjected to heat, and they represent a series of fusion points. cones do not measure the exact effect of heat on ware, nor do they measure exact temperatures; they are a guide to both. although the composition of the cones is somewhat like the wares, they differ in that the cones must fuse or melt while the ware does not. in practice, pyrometric cones are placed in the kiln at a point where they can be watched through a peep hole, but at the same time will not receive the direct touch of flame from fuel. usually two or more cones of different numbers are put in the kiln to show first how rapidly the temperature is rising and second when the end point of the firing has been reached.
   3. firing rings are made of specially prepared clay bodies whose shrinkage is definitely known, and of a definite inside diameter. as the rings shrink due to the effect of heat, they get smaller and cannot go down as far on the conical rod, which is graduated so that the distance to which the ring slips on is an indication of the effect of the heat upon the clay in the kiln. like pyrometric cones, firing rings can be used only once.

4. pyrometers are the most widely accepted means of measuring heat in industrial practice. these scientific instruments are of various types; a thermoelectric pyrometer indicates temperature by means of the change of the voltage from a thermocouple; an optical pyrometer indicates temperature by means of the change of light emitted by a hot body, a radiation pyrometer indicates temperature by means of the change of the heat radiated by a hot body, usually measured with a thermocouple; and a resistance pyrometer indicates temperature by means of the change of resistivity of one of its parts.

VI. glazing

a. salt glazine -- salting is a method of applying a glaze near the end of a burning period by introducing salt into the fire box and allowing the fumes to carry over into the kiln chamber and settle on the ware, fusing with the surface. ordinary salt, is most often used for this method of glazing because of its cheapness, and because it volatilizes at a low kiln temperature, about 1400°f. practically all sewer pipe is salt glazed as well as some face brick and tile, and the method has long been applied to stoneware.

b. slip glazing. -- there are certain natural clays containing a high percent of fluxing impurities, which will of themselves form a glaze. the most common in the united states are albany slip and michigan slip. they will burn to a deep brown in color. they are occasionally used as temperature indicators because of the variation in color at different heats. a good slip clay makes a glaze free from defects common to artificial glazes; it will fit a wide range of clays; and since it is a natural clay, it will undergo the same changes in firing as the body on which it is placed.

c. dipping. -- prepared glazes are applied to ware most quickly by dipping. each piece is lowered into the glaze mixture in liquid form and is handled in such a way that any surplus is thrown off the surface and an even coating of glaze is left. this method is still used somewhat in industrial practice as well as in studio work. it requires considerable skill on the part of the worker.

d. spraying is the mechanical method of application in general industrial practice. a spray gun atomizes the glazes by means of compressed air and spreads it evenly on the ware. the spray gun may be operated manually, but there are automatic spraying booths now in use which eliminate any handling of the glaze.

e. the ancient chinese had a system of spraying wherein the worker dipped the end of a piece of bamboo, covered with a thin cloth, into the glaze, and then blew through the other end of the bamboo to spray it on the vase.

f. painting is a more laborious process than dipping or spraying. brushing the glaze on by hand is more often used only on pieces which are to be one-fired or on wares on which part of the bisque surface is to be left unglazed.

VII. decorating -- decoration, in addition to glazing, may be applied to ware when it is in the green state, the bisque state, or the glost state.

a. on the green ware

1. sprigging is the application of modeled pieces to the surface, cementing them on with slip. this is the decorating method for which many wedgewood patterns are famous.

        2. slip painting is the laying on by tracer or brush of coatings of clay, usually contrasting in color to the body.
        3. piercing is the removing of small areas of clay from the ware to leave a pattern of open spaces.
        4. incising is the cutting away of a shallow layer of the clay body to leave a relief design.
        5. inlaying is the setting in of contrasting clay in an area which has been incised.
        6. sgraffito is the scratching out of designs on a surface which has been previously coated with a slip in contrast to the body clay.
        7. imprinting or embossing is the pressing of patterns into the clay surface with dies or stamps or embosssing wheel. in industrial practice, the effect of embossing is limited by relief impressions in the plaster mold when a piece is cast.
    b. on the bisque ware.-- any decoration applied to the ware before it is glazed is called underglaze decoration.
        1. free brush painting is done by hand directly on the surface of the bisqued ware.
        2. lining or banding with underglaze colors may be done either by hand or by machine.
        3. sponge or rubber stamping is the imprinting of a design on the surface of the ware by means of stamp pad soaked with color.
        4. stencilling is the brushing or spraying of color around a cut out pattern.
        5. steel or copper plate transfer is a method of decorating in which the design is etched on a metal plate, the plate charged with color and printed on a transfer paper, and the transfer paper applied to the surface of the ware. each color is applied by a separate printing.
        6. decalcomania is an easier transfer method in which many colors may be printed on a single transfer paper which is applied to the surface of the ware.
    c. on the glazed ware -- any form of decoration put on after the glaze has been applied is called overglaze decoration.
        1. decalcomania is the most common overglaze method. it is usually done after the glost firing and then burned on at a low temperature in the decorating kiln. like a burned-on-low temperature luster, it is not as permanent as the ware on which it is put.
        2. hand painting is done either on the unfired glaze, as with stoneware, or on the fired glaze, in which case it is burned on at low temperature
        3. spraying of stencils may be done either on the unfired glaze or on the fired glaze.
        4. ceramic photography is a method of decoration still being perfected. it is done more often on porcelains and enamels, usually for limited production where speed and quantity are not the aim.
        5. burned-on lusters may be considered another means of decorating on the glaze, when they are not true lusters incorporated into the glaze, but are fixed on afterwards at a low temperature.

VIII. finishing off and inspection. -- the completed ware must yet undergo a few hand operations before it is ready for the buyer. from all earthenwares, the stilt marks left in the glaze fire must be removed. this is usually done by chipping off with a steel tool. porcelains and other wares glaze fired while resting on their own weight must be fettled to assure a smooth foot. this is usually done on a carborundum table wheel by holding the foot against the revolving surface. then the pieces are checked over for cracks or crazed glaze or other defects and the faulty ones rejected as seconds.

ceramic sculpture

materials useful in ceramic sculpture

small boards or heavy cardboard
wooden modeling tools
coffee tins for small amounts of clay
pencils or small sticks for props
bowl for water
sponge
kitchen paring knife
used outing flannel
paper towels
twine

materials for glazing

mortar and pestle
camel's hair brush
teaspoon
unglazed, for mixing
sink scraper
small kiln

methods of construction

supporting.-- long thin shapes must be supported by some kind of prop until clay has hardened enough to hold its shape.

solid construction.-- this is best for making small objects. solid forms may be hollowed from the underside, or may be cut through horizontally, scooped out, and then slipped together.

paper core construction -- modeling is done on paper core. after the clay is dry, the object is cut in two and the paper removed. the body is then put together by slip.

characteristics & methods of instruction

junior high school
1. characteristics:
    - a. the student has a great interest in skills and craftmanship.
    - b. likes energy consuming activity.
    - c. subject matter--human figure more important, although animals are still popular.
    - d. has a liking for tools and tool processes.
    - e. desire to execute accurately.
2. methods of instruction:
    - a. work with and without model--students may pose for each other.
    - b. graduate the study of figure work from simple to complex problems-the student may become discouraged by undertaking problems beyond his skill.
    - c. design should be stressed.
    - d. work in clay can help bridge the gap between the unconscious approach and the conscious approach.

senior high school

1. characteristics:
    a. the individual gains considerable mastery of his powers.
    b. sometimes interest which has been lost is renewed at this time.
    c. the individual is striving to be an adult and so may imitate some adult. the teacher should then stress the importance of one's own ideas and workmanship and set it up as the highest ideal of the artist.
    d. subject matter--the human form seems to be most popular, although all subjects are utilized.
2. methods of instruction:
    a. develop a sense of appreciation by contrasting the student's work with that of others.
    b. his interest in adult standards may be utilized by interesting him in the work of the masters.
    c. use an individual approach--some students have been inhibited by previous experience. the teacher must take into consideration both this student's advanced intellectual understanding and his under-developed creative power.
    d. the conscious approach, the end product, is emphasized.
    e. all techniques may be taught--casting, etc.

plaster

points to be covered

- I. introduction
- II. history
  - a. including fresco technique
- III. explanation of various techniques
  - a. direct plaster
  - b. plaster carving
  - c. plaster molds
- IV. movies illustrating discussion
  - a. "plaster sculpture"
  - b. "plaster casting - waste mold method"
- V. bulletin board
- VI. slides
- VII. summary
- VIII. question and answer period

plaster obtained the name of "plaster of paris" in consequence of being manufactured by calcination of gypsum in the neighborhood of paris. very early in greek history we find that the use of plaster of a fine lime stucco reached perfection in architecture. it formed a splendid ground for decorative painting of this period.

fresco painting consists of painting on freshly laid plaster, with colors ground in water only (plaster meaning, a coating of lime and sand, or cement and sand). the paint penetrates the surface of the plaster, is incorporated with it, and the two dry together. the colors used today in fresco are fundamentally those which giotto and leonardo used. the great period of fresco ran from giotto to michealangelo. only a few of the great paintings remain, as painting is far less lasting than sculpture.

direct method - armature

draw a rough sketch of the finished armature and then decide the approximate size and relationship of shapes within the armature. build the armature from heavy galvanized wire rather than from aluminum rods or other material that is not as pliable. braze all the joints securely to prevent the plaster from cracking later due to some movement of the armature. wind copper wire around the heavy galvanized wire, as this helps keep the plaster from sliding. bend the wire to the desired positions and set in a plaster base, unless the armature is free standing.

wire mesh, screening, cloth, and many other materials can be used to fill in areas, giving strenth, texture, and space relationship to the sculpture.

hydragel, a thin coating of plaster is applied. plaster of paris, mixed with three parts water to five parts plaster, may now be put on the armature. if desired, the plaster may be shaped on the armature while wet, or finished by rasp and sand paper when dry.

plaster carving

"in carving, the sculptor starts with a rough, solid block from which, in the course of his work, he hacks and chisels away the superfluous matter until the desired form emerges." (dr eitner)

the dimensions of sculpture, both carved and modeled, vary from works fully in the round, standing free in space, on the one hand, to low relief which may approach the two-dimensionality of painting. the basic components of sculpture are the simple geometric shapes of curve, sphere, cylinder, etc. there are infinite possibilities of variation and innumerable degrees of complexity in the use of these basic forms. the work of the sculpture may be treated as a clearly delimited extreme solid, of essentially tubular or block-like shape, or,at the other extreme, its contours may be broken, the integrity of its mass dissolved, the simplicity of its basic components made complex and obscure.

the charm of plaster carving lies not only in the vigor and simplicity of the sculptured form, but in the relatively easy handling of material and the low cost of the plaster.

materials
can be simplified according to the need and budget of the instructor. common kitchen utensils may substitute for preferred, but more expensive carving tools such as rasps, rifflers, files, extracto knives, linoleum cutters, etc.

casting
of plaster is easily completed in a very short time. the plaster is sifted into cool water and left to stand for about three minutes before it is poured into blocks. milk cartons or shoe boxes may be used for forms. the plaster should harden in about 15 minutes. (equal parts of plaster and water by weight is a good recipe).

carving
may start before the plaster is completely dry or the block may be held under water for a few minutes to soften the surface. detailed carving may be done when the block is hard and dry. finishing first with sandpaper and then paper toweling or a soft cloth will give a smooth surface. water may also be rubbed over sharp edges.

waste molding
this process is used either when only one reproduction in plaster is desired or in very large work. proper divisions are made in the most solient of the model by small pieces of brass, so that when the mold is finished it may be opened and all the clay removed. the model is now covered with a coat of colored plaster which is made by coloring the water with which the plaster is mixed, with bluing or dry color. in the process of chipping the plaster from the molded cast, this coating is the warning signal that the cast is near and that chipping must be done carefully to prevent cutting into it.

after the first coating of colored plaster, about three-eighths of an inch thick, a thicker coating of white plaster is applied. when the cast is large, or when there are parts of it that might break easily, it may be reinforced with iron pipes which are fastened to it with strips of burlap dipped in plaster. the brass has made a natural cut in the plaster mold, thus dividing it into sections. these are removed from the model, washed with water, soaped with green soap, melted in hot water and allowed to cool. then with a dry brush all soap is carefully removed from the mold and a slight coating of olive oil is given to insure the proper separation of the mold from the cast. the sections are now put together and held in place by burlap dipped in plaster or tied with wire, and the mold is ready for filling. in order to remove this mold it must be chipped from the cast, because the undercutting of the cast does not allow the sections to be lifted off as in the piece mold.

there are three methods of procedure in plaster casting; the gelatine mold, the piece mold, and the above mentioned waste mold. the cast of a bust or other simple work can be made in one piece. the sections of the mold are united and the plaster at a proper consistency poured into it. by continually turning the model, the plaster may be evenly distributed. a thickness of three quarters of an inch is sufficient to make a strong cast, especially when it is reinforced inside with burlap dipped in plaster, or with iron pipes, where the model is small it may be entirely filled, thus forming a solid cast. in the cast of large works in which there is no way of moving the mold around, the cast is made in sections. when they have set, the sections are joined together and properly strengthened on the inside, great care being taken that all joints are clear of plaster thus allowing them to fit precisely in place.

chipping

sufficient time should be allowed for the plaster to set properly, then, with a mallet and chisel the outside iron pipes are removed and next the natural colored plaster, leaving the thin colored coating. this should be removed with care to insure a plaster cast without a blemish. the plaster cast can be retouched with a plaster mixed to a thinner consistency than the original casting plaster and care should be taken to wet the model before applying.

tinting and finishing processes

plaster is made of equal parts of plaster and water, the plaster being poured into the water and given sufficient time for absorbtion, after which it can be stirred gently. there are various ways of tinting plaster casts after the above process plus pouring and setting the cast have taken place. in some instances the plaster can be made to resemble bronze, terra-cotta, etc. one of the most common methods is the oil paint method. one coat of shellac should be given as primer. after this has dried thoroughly, a coat of oil paint of brown with a little dryer is applied and then allowed to dry. if a greenish tint is desired, a very thin mixture of light green oil paint is applied to the brown coat. when it is almost dry, it is wiped off with a rag, allowing the green color to remain in the deeper cut parts for a metallic effect. when thoroughly dry it is rubbed with ordinary prepared furniture wax. this will subdue any unpleasant shine effect and unite the two color effects.
there are also various finishes which can be purchased at ART stores which give the metallic effect when applied to the plaster cast.

casting a low relief panel

presuming the panel is a simple one with no undercut parts, you proceed as follows. lay the panel on a table, face upwards, and build a clay fence around it, leaving a margin about an inch wide. (wood slats can also be used for a fence.) brush the margin of the table showing with clay water or some substance to prevent the plaster from sticking to the table. proceed to pour the plaster and when it is slightly wet reinforce it with irons or wood battens. allow the mold to set, then take the fence away turn it over and withdraw the panel. if the material from which the mold was made is clay it can be dug away carefully without damaging the mold.

to clean the new mold, place it under water and clean away all of the clay. a small modeling tool may be needed to clean out small crevices. when the mold is clean repair any holes or damaged parts with plaster. after the mold has set hard, the surface is thoroughly lathered with a solution of soap. twenty minutes of soaping will suffice, followed by a drying period until the surface appears dry. now brush in a very small quantity of olive oil. this should give the plaster a luster or dull sheen. the mold is then put back under water for fifteen minutes to ensure the plaster being thoroughly saturated so that it will not absorb water from the freshly poured plaster, leaving air holes in the cast. when the mold is removed from the water, allow it to drip well, and then pour in fairly thin plaster making sure that there are not air holes. repeat this process until there is a coating about 1/4 inch thick. the new cast will need reinforcing and for this sacking is used. cut into squares, it should be soaked in water and then dipped in thin plaster before being pressed in the cast. make sure they cover most of the cast and also that none go right through the plaster. fill the mold with plaster and let harden. while the mold is still a little soft, level off the back. for a small mold, allow about half an hour for the plaster to set.
to get the cast out of the mold, turn the mold over on some soft padding. if the cast sticks, tap the back of the mold lightly but sharply with a mallet. after the cast has been removed, inspect it carefully for air holes or breaks. these should be cleaned out and filled in with plaster. these can be smoothed out so that they do not show.

piece mold

as the name implies, piece molds are made up of a number of casts and will keep indefinitely. the size of each piece is regulated by the amount of undercut parts. when there is any doubt as to a piece dropping off easily, it is better to make it in two rather than run the risk of breakage of the mold or cast.
care must be taken to plan the piecing so that the pieces will not fall inwards when assembled in the casing. juggles and keyways are necessary on all sides, and the entire mold is built up piece by piece until the final key piece is put in place. the key piece holds all the others in place and should have a small loop of wire inserted in its back to use as a handle to allow removal, as this is the first piece removed. these pieces need no reinforcement if they are made thick enough to take handling.
to make the piece, outline the area with fencing, and cover nearby clay with soft damp paper to protect it from splashes of plaster. apply the plaster for the first piece, and when it is set remove it, cutting joggles to suit. give the piece a good coat of shellac, oil slightly and return to its place on the mold. this is done so that the pieces fit tightly together, since space between pieces will let the plaster soap between and cause trouble. a case is made to hold the pieces in place. this case is reinforced with sacking and irons and give it strength and durability. joggles are also cut in the case edge, as the case is made in two halves and must fit tightly together.

we include here a brief list of sculpture in the minneapolis-st.paul environs which is of special value in this area, since it is comprised of the work of local artists.

dorothy berge:	figures on unicyle (metal) southdale center, minneapolis
peter lupori	saint joseph (mahogany) college of st. catherine st. paul, minnesota
	head of christ (welded metal) lake harriet methodist church minneapolis, minnesota
	our lady of mount carmel (stone) nativity school, st. paul, minnesota
	jeremiah (ceramic) rabbi w. gunther plaut mt. zion temple, st. paul, minnesota
	stations of the cross (ceramic) church of the holy childhood st. paul, minnesota
john rood:	figures (wood) our lady of grace edina, minnesota
	the good shepherd (stone) church of the good shepherd edina, minnesota (facade)
daniel soderlind:	abstract sculpture (metal) southdale center, minneapolis

commercial ART

- postermaking
  - elements of design
  - principles of design
  - lettering
  - material

- design
  - design considerations

postermaking

the ability to design and make a good poster is an asset. it may be considered a necessity, for good posters are in demand. posters which are difficult to read, are cluttered or are unable to convey their message are abundant.

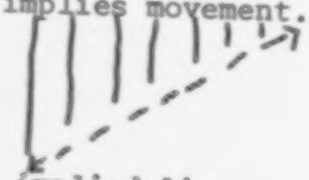
the first essential for postermaking is an understanding of the elements and principles of design.

elements of design

1. line

   the two basic lines are the straight line and the curved line. generally a horizontal or vertical line implies strength and/or stability. a diagonal or curved line implies movement. a line may be defined or implied

defined line



implied line

   lines serve to guide the eye. the point at which two lines meet or intersect each other attracts attention.

2. direction

   generally direction can be defined as horizontal, vertical and diagonal (or oblique).

3. shape

   the basic shapes are; circle, rectangle and triangle.

4. proportion or size

   objects may be actual size, reduced in size, or enlarged. size is relative. something is large or small only in relation to something else. unusually large or unusually small objects attract attention.

5. texture

   texture gives a three dimensional effect. it also guides the eye through repetition of similar texture patterns.

6. value

   variations of lights and darks create interest and can be used for dramatic effects. design should have the appearance of a light design on a dark ground or a dark design on a light ground.

7. color

"color is the lifeblood of a poster. but it is not how many colors are used on a poster design, but what the colors are and how well they are related that is important.

a review of the properties of color may be helpful

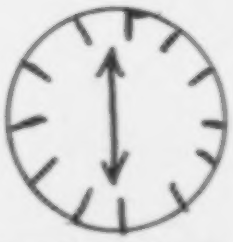
hue - the nature of the color. that which makes one color distinguishable from another. the various colors, red, blue, green, etc.

value - denotes darkness and lightness.

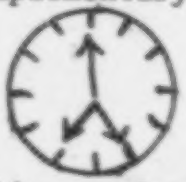
chroma or intensity - the purity or carrying power of a color. red-orange is more intense than is grey-blue. intense colors are those which hit the eye with considerable force.

tints - addition of white or of clear water

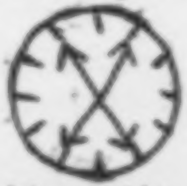
shades - addition of black or complement



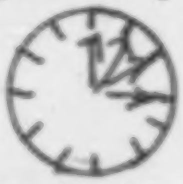
complementary



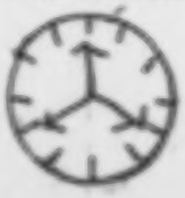
split complementary



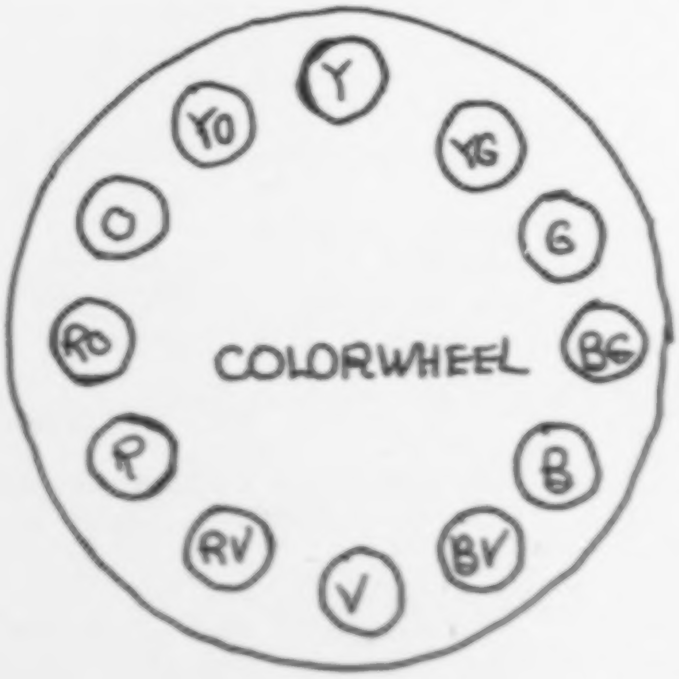
double split complementary



related colors



triad



8. space

space is relative to the objects in it. there should be clear relationship between space and objects. use all the space, but don't fill it all. see that it works for you. give as much attention to the shape and size of the space that you do not fill as to the space which is filled.

principles of design

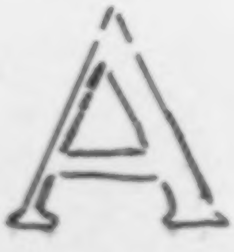
1. repetition
2. harmony
3. gradation or sequence
4. contrast
5. unity

the principles of design are realized through the organization of the design elements listed above.

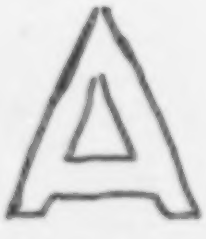
lettering

a poster is a means of communication. an idea can be communicated through a picture, but more often, in a poster, one or more words are needed to define the message. in order that the message might be clear and well-defined, lettering must have the same qualities. good lettering is a matter of practice. good lettering is essential for a good poster.

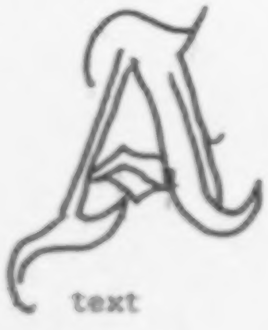
1. basic lettering styles
   a. roman - thick and thin letters.
   b. gothic - block or single-thickness letters. more serviceable in postermaking. bold and powerful.
   c. text - manuscript styles. limited poster use.
   d. italics or script - slanted letters. script - letters joined. italics - letters separated.



roman



gothic



text

2. some general rules regarding poster lettering

    a. watch the background areas left by letters
    b. alphabets should be strong and bold
    c. should be variation in lettering - especially size
    d. use an alphabet which is in character with the illustration
    e. lettering should not be too similiar in tone to the surrounding area. keep value contrasts strong.
    *f. don't deviate strongly from standard alphabets. usually the further you deviate from standard alphabets, the less legible your lettering becomes. it takes much practice and experience to create your own alphabet.

3. some means of bringing attention to a word or words

    a. increase the size - make important information large.
    b. make letters heavy and massive
    c. use attractive or unique letters (don't make up ridiculous alphabets just for the sake of being unique)
    d. use rich or brilliant color (avoid vibrations)

a suggestion for spacing:

spacing is a serious lettering problem. mechanical spacing is generally unsatisfactory. eye-spacing is more acceptable. you must consider the open spaces between letters. assume that you are filling the spaces between the letters with water. there should be an equal amount of water between all the letters.

elements of poster design

some general rules

1. clear separation of ideas
2. logical presentation - important things should be emphasized
3. understandable details - illustrations and lettering should be clear

a poster

1. should carry well
2. should be simple
3. should be interesting and attractive
   a. idea and design
   b. good value contrast
   c. arrangement of details
   d. rich color schemes
4. should be convincing
5. should leave a definite message

material

1. board
   a. a dull, slightly grained surface is superior
   b. board should be reasonably thick to prevent curling from shrinkage
   c. illustration board or poster board is good

2. painting mediums
   a. tube tempera - produces a rich, opaque color
   b. jar show card colors - opaque color, easy to use.
   c. india ink
   d. colored inks - not as favorable as poster colors. not as brilliant. don't carry as well.

3. brushes and lettering pens

poster colors may be burnished to make them shine. this can be done by placing tracing paper over the painted area and rubbing the paper with the back of a spoon. polishing with a soft cloth or cotton will also make it shine.

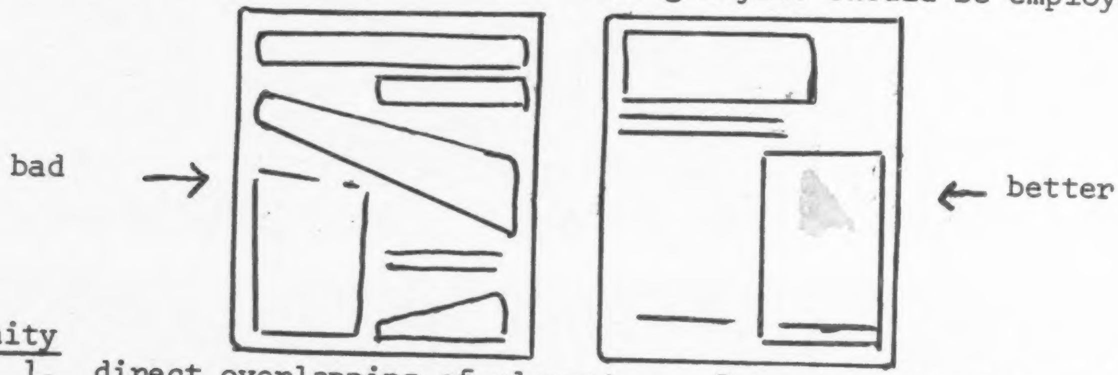
good materials are an essential part of a good poster.

the cardinal principles of poster design

the cardinal principles of poster design are those things which make a poster 'click'. there are certain things which make one poster an outstanding piece of work the lack of which makes another poster unattractive, unimpressive, and ineffective.

1. simplicity

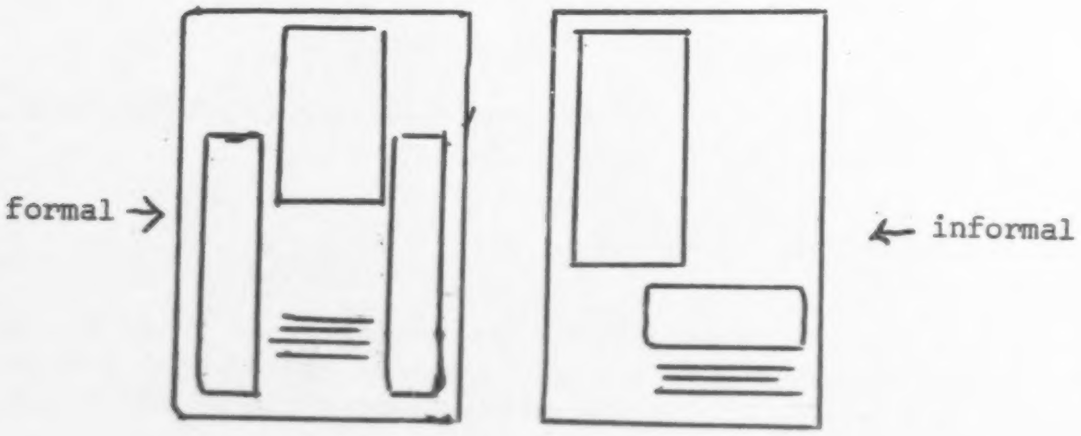
layout should be simple. the fewer units the better. units should be few and simple. treatment should be simple. a minimum of painting techniques and lettering styles should be employed.



2. unity
   1. direct overlapping of elements. often the lettering overlaps the illustration.
   2. pointing devices - arrow, pointing finger, dots, lines, etc.

3. balance

balance may be either formal (symmetrical) of informal (asymmetrical). must create an equilibrium. a poster is seldom balanced if any of its units looked as if it could be moved to any position other than the one it occupies on the poster.



4. selling point
   the essential purpose of a poster is to sell an idea or a product. a poster should lead to action.

5. surprise
   surprise is especially important when the poster has been designed for a "one-look-audience". in this case, the poster must attract attention immediately. humor, drama, distorted size, color, precarious balance, out-of-ordinary perspective - all help direct attention.

6. workmanship
   workmanship does not include the idea or the layout necessarily. it is more concerned with the handling of the medium, the merits of the worker as a designer and draftsman, an expert letterer, and a skilled technician. neatness is also a factor.

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designing and making a good poster is not impossible. it is merely a matter of applying the elements of design, practicing and employing good lettering, and endeavoring to follow the cardinal principles of poster design.

design

design considerations

1. container or package, and coordinated tag for a gala fete; or, a new graphic design for a commercial product.

2. point of sale - counter top display for department store or specialty shop subject - cosmetics or perfume
   record albums

   construct from materials in full color, include a minimum of lettering
   (a) one piece of board display - folding and scoring and using tabs. make a paper pattern before using finished board and several pencil layouts of cut paper shapes and line.
   (b) design a counter or table top unit from 4 pieces of board and finish in color like above using 4 variation pencil and color notation layouts using any materials.

3. overhead projector - opaque or other

   space projection related to sources of design or a topic in your major interest area.

   your supplies will have to be furnished by you:
   acetate for 3-m projector plus zipatone or other transparent overlays, or commercial lettering and ink for acetate or an opaque collage composition exploring one visual idea.

4. display window for your major interest for a department or specialty store
   example: towels, glass, furniture, accessories for interior or costume, fashion, food, housewres, etc.

5. an exhibit in a defined space related to a topic in home economics - scale model in color plus 2 dimensional rendering.

6. coordinate a major gala fete event or dinner - dance or community activity or fashion show
   - tables
   - programs
   - menus
   - props for fashion show
   - decorations for hall
   - flowers
   - dance programs
   - publicity
   - the gala parade - a float

7. hammock or rope design structure

8. surrounding structure to stand in, sit in, kneel in, with color can be non-objective
   a solid, open areas, line shape or a playground sculpture or structure for children. can use: dixie cup lids, tubes, hoops, cups, boxes, dowels

9. tactile - three-dimensional feeling
   1 pleasing - construct from plaster
   1 unpleasing (can be object found)

10. a two or three-dimensional game any material plus rendering

11. a three-dimensional lighting source - color and light can use transparent glass stain on acetate

12. a three- dimensional bulletin board display working with another person

13. space: positive and negative
    construction
    mobile or stabile - motion in space
    simple materials like balsa wood, wire, tissue, year, stage gelatin, cellophane, etc.

14. decorative door or screen divider from wood assemblage

15. solids from paper:
    sculpture handling space related to architecture or environment

16. the wall
    select an existing situation and design a wall for:
    - storage
    - collection arrangement
    - relief construction - shadows

17. shadow puppet presentation
    cut paper like shape, mosaic, positive, negative

18. organizational or corporational image
    1. mailers or printed material
    2. posters - billboard
    3. stationery (letterhead and envelope)
    4. boxes - containers
    5. signature
    6. moving vehicles

beliefs - ART teacher

we as ART educators believe:

ART is a basic impulse

ART is visual and personal

some students are visual and some are non-visual

classroom situations are different and therefore classes cannot be taught the same

classroom facilities dictate the curriculum of teaching

no two ART educators teach alike because of emotions, sex, personality, environment, experiences and attitudes

the community plays a large role in the type of individual ART interests.

beliefs - parent and ART teacher

we believe as a parent or an educator we should appreciate, understand and show acceptance for the child's work following the basic ideas of ART.

every parent and educator possesses the key to a child's creative growth.

the key is:

understanding the child and his attitudes,

encouraging free expression,

encouraging him through sincere interest and compliments,

never laughing at his efforts to create,

never asking what he has drawn,

never comparing his work to another's,

enjoying and appreciating his work from the standpoint of creativeness and truthfulness - as child's ART has no rules or boundaries.

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ED

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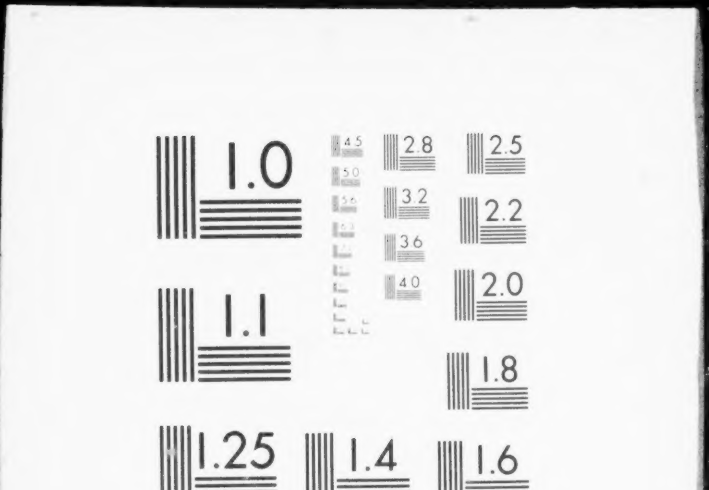
1.0
4.5
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2.8
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1.4
1.6
MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

student support

student support and interest is so important in the promotion of a successful ART program that it can either make or break the course of study. if the student is excited about his work, his excitement naturally is conveyed to parents, faculty and classmates.

in order to provide this excitement for students, many methods can be applied. the teacher must first convey excitement in introducing an assignment, display students' work, both in the school building and in the community, and see that the student achieves recognition, in some form, for a job well done. the latter is extrememly important to the student of this age group because ego stimulus is a boost for motivation.

staff support

the support of the school staff is an important factor in developing interest in an ART program. to develop this support the ART teacher must show an interest in the work of other staff members.

it will be greatly appreciated if the ART teacher offers his services to members of the faculty for classroom displays, artistic advice, and ideas for an integrated ART program.

students work should also be put on display around the building for teachers to see in order to develop appreciation of student ART work and the appreciation of the ART department as an educational contribution.

administration support

many times it is the feeling of the administration that they are uninformed of or excommunicated from the ART department. the teacher, as well as the student, plays a large part in helping the administration over this hurdle. naturally the best ways in which to do this are through developing interest among students and parents, providing interesting reading materials, displaying ART in the building, and having discussions pertaining to the ART teacher and the ART students.

other ideas of some value would be speaking engagements by teachers or students for community organizations.

a teacher cannot expect support from the administration if steps are not taken to prove that the ART course is a valuable course of study and an asset to the school.

public support

to achieve the support of the public every available medium may be used - newspapers, television, radio, p.t.a., posters, flyers, and adult ART classes.

ART exhibits of student work may also be shown throughout the community. many businesses in a community will be happy to have student exhibits.

support summary

in summary, we feel students, teachers, administrators, and the public fall into four main catagories when speaking of ART education. these four groups are negative, restricted, laissez-faire and positive. in writing the support portion of this curriculum it was our intention to give concrete ideas in establishing a "beach-head" to improve relationships through the use of educational ideas, publicity, lectures, demonstrations, and exhibits.

it is not felt that these will be "cure all" methods. however, the ART educators have been delinquent in their duties to all these groups, even the positive, and it is time to take a stand. if ART educators are animated about their own programs their animation will spread and the enthusiasm will be contagious.

appreciation

- ART history
  - cave ART
  - egyptian ART
  - greek ART
  - roman ART
  - dark ages
  - byzantine ART
  - the renaissance
  - spanish ART
  - romantics
  - early american ART
  - french ART
  - post impressionists
  - fauves
  - abstract ART
  - modern ART

- architecture

- non objective ART

- surrealism

- cultures and styles
  - primitives
  - sculpture

- recent ART movements

ART history

cave ART

examples date back to 20,000 b.c. man was trying to express himself. ART was a basic need. they drew animals because their life was centered around the animals. the animals would kill them, or they would kill the animals for food. life was not so complicated, just basic, but ART was still one of these basic needs.

examples found in caves in altamira, spain and in france.

egyptian ART

this civilization flourished from 3500 b.c. to 500 b.c. a stylized ART - followed a strict set of rules, passed on from one ARTist to the other. figures were drawn one way, faces in profile, the rest with the front view. perspective was vertical. if something was farther away it was placed above the other things. things were made clearer than in real life. more orderly. life centered around death and the after life, therefore the tombs are fabulous collections of ART and ARTifacts.

the egyptian painters showed what they knew, not what they saw. most of the paintings told a story, were not done merely for beauty. their stylized ART led to hieroglyphics, an early form of picture writing.

king tutankhamon's tomb - a treasure house of ART, found in the early 1900's.

the head of nefrititi - one of the most beautiful pieces of sculpture of all time.

greek ART

from 500 b.c. to the present. the greeks idealized beauty. paintings and sculpture were done in a classic style to idealize man. they were very naturalistic, but showed man in perfection. their ART was very advanced, just as the rest of their civilization. very few paintings left, but the paintings on their pottery show us of their life and what their painting must have been like.

acropolis - the hill in the center of the city, with the temples to the gods on it.

parthenon - the temple to athena on the acropolis in athens. decorated with relief sculpture or a frieze.

the greeks gave us ideas to follow in many things - government, sports, ART, literature, drama, etc. Many of them are still followed today.

praxiteles, pheidias, famous sculptors

classic statues - "the winged victory of samothrace"

"the statue of athena" in the parthenon

"the discus thrower" by myron

classic arcitecture featured three kinds of columns.

roman ART

flourished from 50 a.d. more realistic than greek ART. learned much from the greeks, but made things more true to life. did not idealize man but made him more human and less god-like. true portraits, not just ideals. much great sculpture and painting has come to us from roman times. they were great architects. massive buildings, excellent roads, aquaducts. made use of pillars and arches.

the collosseum in rome, world's most famous ampitheater.

dark ages

from 500 a.d. to 1200 a.d., approximately. ART deteriorated during this time to much less than it had been in roman times. dull, drab colors were used, religious themes. the same subjects were painted in the same way over and over. no originality.

byzantine ART

from 1200 a.d. to 1400 a.d. two styles of painting began to emerge.

romanesque - derived from pictures used to illustrate the sacred texts.

byzantine - official style of the eastern church centered in constantinople.

painters were forbidden under severe penalties to alter the holy images or "icons" as they were called.

mosaics were popular. ART was not realistic, it was symbolic. reminded people of the teachings of the church. gold backgrounds were used.

"madonna and child with the baptist" by cimabue, famous byzantine painter.

frescoes were used

two great ARTists came out of this period.

duccio - "the calling of the apostle peter and andrew" in the details of the net, was the beginning of realism.

giotto - lived in florence. began to convey a convincing impression of solidarity and volume. the first suggestion of perspective.

for 100 years the painters followed giotto's way of painting, then they went farther with perspective and volume.

the renaissance

from 1450 a.d. on approximately.

early renaissance

donatello - one of the great figures in the history of sculpture. did a realistic statue of david with his foot on the head of goliath. this inspired michaelangelo when he was a young man. it is done in marble.

andrea mantegna - one of the masters of foreshortening or perspective. very realistic paintings.

fra angelico - "madonna of humility"

fra filippo lippi - did some lovely madonna paintings.

botticelli - flowing lines and harmonizing colors. did a wonderful venus. did a portrait of guillamo de medici, lorenzo's brother who was killed.

verrochio - did a bust of lorenzo de medici that is powerful,dignified. the piece of sculpture personified the renaissance.

the universal talents of lorenzo de medici, greatest ART patron of all times, described the creative energy of the renaissance.

northern renaissance

the brothers van eyck - meticulous details, rich lustrous colors. perfected the technique of painting in oils and revolutionized the ART world.

pieter bruegel - did some huge landscapes, with many details. used everyday life for his subjects

albrecht durer - did many intricate woodcuts. many had religious themes. did drawings of animals. his portrait of a rabbit is very famous.

high renaissance in italy

leonardo da vinci - he was a great inventor, writer and architect as well as an ARTist. painted the "mona lisa", "the last supper" - frescoe.

michaelangelo - famous for his marvelously real sculpture. "the statue of david" is in the piazza of florence, italy. painted the frescoes of man in the sistine chapel on the ceiling. designed st. peter's dome in rome.

raphael - called the divine painter. famous for his madonna paintings. often used a circle as a format.

high renaissance in northern europe

rembrandt van ryn - called the "poet of light" for his use of light and shade (chiarascuro) also called the painter of man. famous painting "the night watch" almost ruined his career.

frans hals - "the lute player"

jan vermeer - "the girl in a red hat" and "the artist in his studio"

spanish ART

el greco - 1550 - earliest famous spanish ARTist.

"Christ driving the money changers from the temple"
the painting that is at the ART institute.

many of his figures were elongated. people thought something was wrong with his eyes, but he was one of the forerunners of modern ART. he was drawing his own interpretation of the subject. many subjects from the Bible. highly emotional paintings. he was originally from greece, thus the name "el greco".

spanish art during the 15th century was influenced by the flemish painters.

velazquez - 1599 to 1660. did a famous portrait of pope innocent X. depicted the character, showed all of his cunning in the portrait. did portraits of many famous people. "the maids of honor" and "the surrender of breda".

murillo - ability to tell a simple story which everyone could understand.

francisco goya - a court painter, but painted the everyday man of spain too. his portraits were very realistic, too much so for some of his patrons. "the third of may" a political painting which showed the cruel politics of the day.

romantics

honore daumier - a cartoonist at heart, showed the life of the people, and spent some of his life in prison because of his cartoons. "the third class carriage" one of his great paintings. lived around 1860.

john constable - famous for his landscapes. romantic themes. very realistic. freshness in his picture "hampstead heath".

william turner - imaginative use of atmosphere. liked to paint pictures of the sea. "the fighting temeraire".

camille corot - landscape painter. harmonious colors and shapes.

thomas gainsborough - most famous portrait painter. showed life in a romantic way. "the blue boy" "mrs. siddons".

william hogarth - cartoonish quality in some of his paintings. "the graham children".

early american ART

the english people who came to america brought with them their handicrafts and the custom of doing portraits of the citizens. what we call "early american" furniture originated with them. a style of painting called "primitive" also originated with them. it has a childlike quality and is usually of quaint scenes.

benjamin west - 1738-1820 one of the most famous of american painters. was a good painter and one of his most famous portraits is "colonel guy johnson" who posed with his indian colleague.

john singleton copely - he also did portraits.

gilbert stuart - 1755-1828 painted the most familiar portrait of george washington.

samuel f. b. morse - he was the inventor of the telegraph, also a painter.

george inness - landscapes "lackawana valley". deep colors.

winslow homer - "breezing up". wonderful with watercolor. often did the sea.

thomas eakins - 1844-1916 "biglin brother racing" studies anatomy.

albert ryder - escaped into a world of dreams.

mary cassat - james whistler - studied with the impressionists in paris. she was one of the first women painters of any importance.

john singer sargeant - 1856-1925 portraits.

william harnett - still life paintings that are so real you can almost touch them. super realism. almost photographic. "old models".

french ART

neoclassicism

a new style of ART developed in napoleon's time. neoclassicism realists took their ideas from the greeks and adapted it to their own time.

jacques louis david - 1748-1825 wonderful portraits, very realistic. portrait of napoleon.

j. a. d. ingres - neoclassicist. color was of secondary importance. only by the use of flawless drawing could an artist hope to become a great painter. did marvelous portraits.

courbet - did landscapes. realistic

corot - another landscape painter. very lovely, restful.

honore daumier - cartoonist at heart. spent much of his life in jail. portrayed the people of paris.

impressionism

manet - one of the first impressionists. excellent portraits, landscapes.

pissaro - street view - typically impressionistic. "boulevard des italiens"

claude monet - "impressions of a sunrise", "plazzo di mula" did landscapes with much atmosphere. his painting "impressions" gave the name to the movement.

august renoir - painted ladies and children, always showed them with apple cheeks, in robust health. "girl with a watering can". "san marco" the painting at the art institute by renoir.

edgar degas - famous for his ballet paintings and paintings of horses. liked the grace of both subjects.

maurice utrillo - painted street scenes of paris. perspective is evident in his work.

mary cassat - one of the few women painters. an american who worked with the impressionists in paris.

james whistler - an american who painted with the impressionists. personified the movement to the american and british people. did a portrait of his mother but called it "arrangement in grey and black" it has been popularly renamed "whistler's mother". he believed in ART for ART's sake but did not practice what he preached entirely. he said to use shape and color, not sentiment.

george seurat - originated "pointillism". painted with the tip of his brush, small dots of color, then had the eye of the observer mix them. "afternoon on the grande jatte" a huge canvas is one of his most famous works.

paul cezanne - made beautiful compositions with lovely, harmonious colors. the perspective is not always correct, but he was more concerned with composition then reality. he did many beautiful still-life paintings.

henri de toulouse lautrec - painted in the cafes of paris. "at the moulin rouge". did many posters.

post impressionists

vincent van gogh - famous for his colorful, thickly painted oils "the sunflowers", "road with cypresses". passionate, frenzied paintings. had a short, colorful, unhappy life. was also called an "expressionist" because he put so much of himself into his paintings. "olive trees" the painting at the minneapolis art institute.

paul gauguin - did flat, bold paintings with bright colors. ran away to tahiti after a career in an office. disgusted with society, liked the simple life of the natives. "view of tahiti", landscape that is at the art institute.

fauves

means "wild beasts" in french. called this because of the bright wild colors they used. started in about 1900.

henri matisse - "girl with a plumed hat" at art institute. he used bright colors, mixed many patterns in paintings. all of his paintings are very free, have lots of movement.

raoul dufy - did many fresh free watercolors. scenes of paris, did some of america. combined watercolor and ink.

george roualt - looked on the pessimistic side of life. his paintings are often of a religious nature. started out life by working in a stained glass window factory. many of his paintings have heavy dark outlines, give the feeling of light shining through a stained glass window.

amedo modigliani - painted beautiful portraits of women. often showed the faces and necks elongated.

abstract ART

abstract ART means ART that has started with something and then changed. not necessarily realistic.

cubism - worked with the cylinder, sphere and cone in nature to start a new style called cubism. squared or cubed something that started with a real subject.

george bracque - did many collages, abstract still-life paintings.

pablo picasso - started to fame with cubism, but has had more other "styles" than any other painter in history. ranged from realistic to far-out abstract. "girl in the mirror".

modern ART

first wave of modern ART in america - the great "armory show" in 1913 in new york. brought the european masters to the american public for the first time. most influential show of the century and created quite a stir.

arthur b. davies - wealthy artist who raised the money for the show. he felt that america was hiding from the ART of the times. critics blasted it, but 300 works were sold. all considered it "ash can school".

a matisse, a nude, marcel duchamp's famous "nude descending a staircase", a cubist painting, the first kandinshy titled "no. 1", a portrait by cezanne, a famous sculpture by brancusi - "the kiss".

a group of eight artists, including john sloan, exhibited their frank portrayals of american life, but were denounced as vulgar.

robert henri - did winter landscapes

george lucks - the crude slashing strokes, and unromantic subjects gave them the name "ash can school" of painting.

george bellows - boxing paintings. recorded the drabness, vitality and beauty.

from these beginnings a new american style began to evolve, with a freshness of outlook and a violence of mood.

today america is the ART capitol of the world. america had had many great ARTists of the past; bellows, whistler, homer, eakins, to name only a few. some of these men worked in the united states, others worked in europe, but never were they considered part of an american school. it took the twentieth century and two world wars to create an american school of ART which was able to draw ARTists from around the world and to be acknowledged as the moving force of world ART.

after the first world war, paris remained the center of western ART with a new emphasis on what purpose ART should have. the disenchantment caused by the war gave rise to new ideas; cubism, the most invigorating force prior to 1914 remained important mainly as an individualized ART form. among the new movements; futurism, dada and surrealism created the most lasting impact;with giorgio de chirico, marcel duchamp, hans arp, max ernst and joan miro the most talented of its leaders.

surrealism, dada and futurism were largely ART forms turned against ART - hence "anti-ART". also working during this period, but not directly a part of the "anti-ART" reaction against the war were three artists who are acknowledged as the prime movers of modern ART; picasso, klee and kandinsky. these three european ARTists have had the greatest influence on the formation of american ART and ARTists. they intentionally and unintentionally developed away from the traditional european schools, including impressionism and post-impressionism and led the way to an ART concerned not with objective reality or the subjective dream world of surrealism, but with the abstract world of the mind. as debussy and schonberg in music, they abandoned conventional beauty and sanctioned every means of expression.

getting rid of the idea that ART must be beautiful is prevalent in the ART of the 1940's, 50's and 60's and with a subtle twist it is claimed that billboard ART, soup can ART, op and pop ART are beautiful.

long before op and pop, a group of painters led by jackson pollock, who collectively came to be called the new york school, began experimenting with a non-figurative style of painting known as abstract expressionism and sometimes called action painting. pollock became notorious for drip painting and for throwing paint on the canvas. he has been accused of every ARTistic sin imaginable. his work has also survived and his ideas have had sufficient influence to obtain for him the title of "father of abstract expressionism". pollock's work was an honest reaction to the world of crisis he lived in and to the cosmopolitanism which grew during world war II. he worked on abstract expressionism in the early 1940's, but its major influence was felt after 1945. it was abstract expressionism and the new york school which made america the center of the new ART. its influence has been more lasting and inspiring than any of the new ART forms which arose from the chaos of world war I. because of the unfettered attitude of abstract expressionism, ARTists have felt free to experiment with new mediums and ideas and there has grown a movement sometimes glorifying, sometimes objecting to and often simply commenting on the neon light america of the 50's and 60's. at the same time a splinter group has moved toward a completely new ART form which glorifies electronic and computer technology, the ART of light, space and motion known as kenetic ART. and, perhaps predicably, there is now a strong movement toward figurative and objective ART.

the first of these movements has had the strongest influence. within this broad movement a number of smaller trends can be discerned; notably, hard edge, op and pop ART. hard edge is basically abstract expressionism abstracted still further and made orderly by the use of strong clear cut divisional lines on the canvas. the colors are often strong, bright and are applied evenly and are meant to interact with each other. op ART, or optical ART, is meant to react much as hard edge only color and pattern are used in such a way as to create a completely visual reaction so that colors spring forth and recede as though they are in constant flux. colors will change in intensity and shapes will seem to change in size and move over the canvas. pop ART concerns itself with american culture, often making a favorable statement even though some ARTists rely on satire or ridicule. although pop ART was born in england it was a reaction to a strictly american phenomenon. it was quickly picked up in new york and new york has remained the major base.

pop ART can be considered the most important ART movement in america today. it is a broad movement and an exact, meaningful description is impossible. generally it is a comment on popular or mass culture. the best example of what pop is would be to mention andy warhol's campbell soup can paintings where he recreated a soup can in its "natural" red-and-white colors. later he used an oil and silk-screen technique to make soup cans in arbitrary colors. why? there are many answers. originally, it said that american life is unreal, and mechanical. it was not meant as a protest however, it was in fact quietly optimistic.

later ARTists became more inventive: george segal has made life-like full size reproductions of people in settings such as coffee counters and automobiles; marisol escobar has made humorous reproductions of famous people; tom wesselmann has made a great american nude series using tape recorded sounds and phones that ring at intervals. some have used ready made objects like full size racing cars, chromed flashlights and soft drink cups attached to wood. roy lichtenstein paints in the style used in comic books, sometimes using words and heroes directly from the books. some pop ART of this type looks like poster ART and many poster makers have borrowed the true to life methods of the pop ARTist. the poster for the tyrone guthrie production of "the mother of us all" is an excellent example of a pop poster.

what it means depends on the ARTist and the viewer. it may mean that the sign advertising a new ford in an auto show room is ART if it is abstracted from its setting or used out of context as a part of a larger painting or collage. some ARTists insist that the ad men have created ART with the advertisement as it is.

small objects can be enlarged to a point where they change character and become more real than life. examples of this are the gigantic hamburgers, popsicles and wall light switches by claes oldenburg. some of these are called soft sculpture because they are made from vinyl and kapok. there is a new cult of the highway with paintings of road signs and highways. roger kuntz and allan d'arcangelo are leaders of this school.

every aspect of american culture has been touched by the new ART and every method of portraying this culture has been attempted. the ARTists operate as one removed from actuality. life as represented in the comic strips or advertisements bears little resemblance to real life. already separated from life by the cellophane barrier of commercialism, pop ART can function with detachment and still retain a hold on the emotional reactions of the viewer. "pop ART looks out into the world",says lichtenstein. the pop ARTists have drawn freely from advertisements for inspiration, especially from the strong, hard and clear color versions with their slightly old-fashioned emblems such as the brillo or delmonte labels, they have steered away from the slick advertisements that imitate the modern fine ARTs. so successful have they been that many advertisers are now returning to stronger, old versions because of pop.

the following list of ARTists and terms supplement this introduction and summarizes some of the information required for an understanding of the new ART. this project is not meant to extoll or condemn the virtues of american ART today. rather, it is meant to acquaint you with prevalent trends and to afford you the opportunity to learn and experiment with current ideas.

ARTists and terms

new york hard core pop ARTists - warhol, lichtenstein, wesselmann, rosenquist and oldenburg

stuart davis - his "lucky strike" package painted in 1921 is an early prototype of pop ART. his latter abstract style has been a catalyst for american pop.

kurt schwitters - his "for kate" (1947) was another early prototype using comic-strip images.

marcel duchamp - an ARTist who early in the century exhibited ready made objects such as a snow shovel, a hat rack, etc., which parallels the mass production principle of andy warhol.

robert indiana - an artist of national importance known for his road sign paintings, eat and die paintings and locally for the posters for the tyrone guthrie production of "the mother of us all."

jasper johns - an artist known for his "flag", a painting of an american flag done in colors which creates an optical illusion so that the stripes appear to change position. also famous for his target paintings of the late 1950's.

robert rauschenberg - one of america's most important ARTists working in a photographic silk-screen technique.

"f-111" - by james rosenquist, it is the world's largest pop painting, 86 feet long and 10 feet high. the theme, in dazzling color, is the image of a jet bomber intersected by four strong verticals showing a tire, a hair dryer, a mushroom cloud and a deep-sea diver.

abstract ART - ART having little or no resemblance to natural appearances. it derives from the rational structural style of cezanne and from the color and curvilinear design of gauguin and van gogh.

abstract expressionism - a term applied to non-objective paintings which emerged in america during and after world war II. some important exponents have been gorky, pollock, motherwell, still, rothko and de kooning. it is abstract ART with the emotional force of expressionism.

dada - an experimental movement which grew out of world war I disillusionment. it was a protest against the sacred cows of ART tradition.

futurism - a movement which tried to capture movement and show the dynamics of the modern world.

surrealism - a movement which emphasized the dream-like world of the subconscious. the anti-ART of cubism.

op ART - optical ART which attempts to make a visual impact through the use of often intricate design combined subtly with vivid color.

objective - in ART the term means that a painting has reference to some object in reality as opposed to non-objective or abstract.

kenetic - an ART form attempting to show movement by using shiny surfaces, lights and sometimes motors which move large objects of sculpture.

found image - a take-off on the early 20th century term found object. it refers to ARTists who have "found" their themes and have taken their ideas from sources such as comic books and reproduced them nearly as they "found" them.

backgrounds of modern painting

classicism - importance of line

david - 1748-1825 - leading painter of french revolution

ingres - 1780-1867 - tried to revive italian renaissance

romanticism - interested in historical subject matter, literary illustration.

girodet - 1767-1824 (pro-romanticism)

gros - 1771-1835 (pro-romanticism)

garicault - 1791-1824

delacroix - 1798-1863

naturalism (barbizon school) - painted out-of-doors

corot - 1796-1875

theodore rousseau - 1812-1867

daubigny - 1817-1878

dupre - 1812-1889

jacque - 1813-1894

troyon - 1810-1865

millet - 1814-1874

independents

courbet - 1819-1877

daumier - 1818-1879

manet - 1832-1883 (bridge from realism to impressionism)

degas - 1834-1917

toulouse-lautrec - 1864-1901

puvis de chavannes - 1824-1898

impressionism - illusion of light and atmosphere

(manet)

monet - 1840-1926

pissarro - 1830-1903

sisley - 1840-1899

renoir - 1841-1919

berthe morisot - 1840-1895

bonnard - 1867-1947

(degas)

(cezanne)

linear impressionism

degas

toulouse-lautrec

neo-impressionism (pointillism) - away from shapelessness of impressionism

seurat - 1859-1891

signac - 1863-1935

post-impressionism - reaction against the formlessness of impressionism

cezanne - 1839-1906

gauguin - 1848-1903

(van gogh - 1853-1890 - holland)

primitivism

henri rosseau, le douanier - 1844-1910

fauves - impact of sense of color (descent from van gogh, gauguin, matisse, the fauves, expressionists)

matisse - 1869-1954
derain - 1880-1954
vlaminck - 1876-
braque - 1881-
rouault - 1881-1958
dufy - 1887-1953
friesz - 1879-1949
dufresne - 1876-1938
de segonzac - 1884-
van dongen - 1887-
marquet - 1875-1947
camoin - 1879-1924
puy - 1876-
manguin - 1874-1950
valtat - 1869-1952

cubists -(descent from seurat, cezanne, picasso, the cubists)

picasso - 1881-
braque - 1881-
gleizes - 1881-
metainger - 1883-
duchamp - 1887-
picabia - 1879-
leger - 1881-1955
gris - 1887-1927

futurism - (italy) - movement, space and time. . . exalting love of war and machine.

severini - 1883-

rossolo - 1885-1947

balla - 1871-1958

carra - 1881-

boccioni - 1882-1916

dadaism - (1916-1922) - contempt for contemporary society and disillusionism after world war I. irrational.. ridicule of all existing standards. basically a literary movement..dada.

french - hans arp - 1888-

german - max ernst - 1881-

kurt schwitters - 1887-

american - man ray - 1890-

surrealism - dream world, subconscious, basically literary

forerunners - pierre roy - 1880-

de chirico - 1888-

chagall - 1890- expressionistic, leading to surrealism

henri rousseau

spanish - joan miro - 1893-

salvador dali - 1904-

french - yves tanguy - 1900-

neo-romanticism

french - berard - 1902-

russian - pavel tchelitchew - 1898-

eugene berman - 1899-

pure abstraction

suprematist (russia) - supremacy of pure feeling - no association.

- malevich
- lissitzky

constructivism (russia) - industrial significance, furniture

- tatlin
- rodchenko
- pevsner - 1886-1962
- gabo - 1890-

purists (france) - influence on architects, designers, furniture, posters, stage, etc. used universal forms such as the egg.

- ozenfant
- le corbusier - 1887-

neo-plasticism - "de stijl" (holland) - ART reduced to basic laws - rectilinear absolutes. no human emotions involved. concerned with dynamics of equilibrium. influence on bauhaus in germany (albers, gropius, moholy-nagy)

- mondrian - 1872-1944
- oud
- van doesburg

(constructivists, de stijl and purists - approach toward unification of pictorial ART with method and materials of machine - led to streamlining and to non-objectivity in painting.)

expressionism - (germany) emotional color, excited and powerful

- kathe kollwitz - 1867-1945
- edvard munch - 1863-1944 (norwegian)
- paula modersohn-becker - 1876-1907
- oskar kokoschka - 1886- (austro-czech)

secession movement

- max liebermann - 1847-1935

die brucke - (the bridge) group

- kirchner - 1880-1938
- schmidt-rottluff - 1884-
- heckel - 1883-
- nolde - 1867-1956
- pechstein - 1881-1955

der blaue reiter (the blue rider) group

- kandinsky - 1866-1944 (russian)
- franz marc - 1880-1916
- paul klee - 1879-1940 (swiss)

neue sachlichkeit (new objectivity)

- otto dix - 1891-
- george grosz - 1893-
- max beckmann - 1884-1950

architecture

louis sullivan - paved the way for modern architecture. first one to use the premise "form follows function." designed the first skyscraper around 1920 - wainwright building in st. louis.

frank lloyd wright - most famous of all american architects. had houses blend in with nature. "taliesen" his house and workshop in wisconsin. "taliesen east"is in wisconsin; "taliesen west"is in arizona. taliesen means smiling brow in welsh. it is built on the brow of a hill. some of his structures are: the johnson wax factory in wisconsin; the guggenheim museum in new york; a gas station in cloquet, minnesota; a doctor's office in anoka as well as many homes in the anoka area; malcolm willey's house in minneapolis; first unitarian church in madison, wisconsin; and the famous "falling water" in bear run, pennsylvania, a house within a waterfall.

saarinen - finnish architect. used clean, modern lines. designed kennedy (idlewild airport.) also designed arch of westward movement, st. louis, missouri

non objective art

modern line, shape and color - has no real objects in it.

vassily kandinsky started the movement. a russian artist in the 1940's. "improvisation no. 30" one of his paintings.

mark tobey - his painting looks like chinese writing. small intricate lines. purples and blue colors.

jackson pollock - paintings look like the paint has been dripped on them. his compositions are important.

piet mondrian - just uses straight lines. order is all important. "broadway boogie woogie."

surrealism

using real things in an unreal way.

salvador dali - "the persistence of memory" clocks on the sand. they are sort of dripping over the edge. he is the most famous surrealist.

yves tanguy - "the furniture of time" an imaginary world, realistically portrayed.

cultures and styles

primitives - ARTists whose work has child-like quality.

primitive - work of primitive cultures.

primitiveness - work of the modern primitive ARTist.

henri rousseau - "the sleeping gypsy" - 1900"s. used jungle figures. had a magical look about them. rousseau was a frenchman.

grandma moses - child-like drawings of new england scenes. she was an american who just died recently at the age of 102. she started painting when she was about 70 years old.

primitivistic - work of fauves and modern expressionists.

derivative primitive ART - folk and peasant ART.

genuinely primitive - children's ART.

sculpture

rodin - the thinker

lipchitz - cubist sculptor, did piece outside walker art center.

alexander calder - famous for his mobiles and stabiles.

recent ART movements

pop ART

the most recent kind of ART in america. uses the commercial aspects of the day. posters, billboards, campbell soup cans are used as subjects. super-real painting. learning to see the things around us.

op ART

optical illusion ART makes an attempt to create a visual impact through the use of often intricate design combined with vivid colors.

kinetic ART

use of shiny surfaces, lights, sometimes motors to show movement. often of large works of sculpture.

psychedelic ART

inspired by sense-heightening experiences.

2

ARTist's history

- american painting
- european painting
- watercolor painting
- sculpture
- architecture

american painting

albers, josef
best known for his paintings with squares. he was an instructor in the bauhaus.

anderson, john (1923-   )
born in mankato, minnesota. painter graduate of walker ART school. he studied in paris and instructed at colorado springs fine ARTs center. exhibited at minneapolis institute of ART, walker ART school, whitney museum of american ART and university of nebraska.

beck, charles (1923-   )
born in fergus falls, minnesota. graduated from concordia college and university of iowa. landscape painter. exhibits at des moines ART center, metropolitan museum of ART, walker and minneapolis institute of ART.

bellows, george (1882-1925)
an american illustrator and painter of city life who was influenced by the ashcan school. he also painted a number of fine portraits in a bold style. a realist of this period, his paintings of boxing matches are well known.

benton, thomas hart (1889-   )
he was the regional painter with a hallucinatory quality. in the 1920's and afterwards there were still a number of important figurative painters. noted for mural paintings.

blume, peter (1906-   )
his work shows magic realism with its realistic style and sinister or fantastic subject matter.

booth, cameron
local artist

cassatt, mary (1845-1926)
lived in france, was a friend of degas and a talented impressionist. influenced by degas, manet and the japanese print, she had a brilliant, bold style but her subject matter (usually a mother and child) was unadventurous. she was partly blind by 1912 and totally so at her death. she is well represented in american museums.

curry, john steuart (1897-1946)
was a regional painter. around the 1920's he was one of several important figurative painters.

dali, salvador (1904-)
was originally a cubist but became one of the leading surrealists until he abandoned its implied marxism and returned to the catholic church. glasgow, new brunswick, new york and other united states museums have his pictures.

davis, stuart (1894-)
was an early abstract artist. by the 1940's abstraction had become the dominant trend in american painting.

de kooning, willem (1904-)
was born in rotterdam but has lived in the united states since 1926. he was trained under the influence of de stijl but has since become a leading action painter. his works have a brutal quasi-realism similar to that of the dutchman appel. he painted a mural for the new york world's fair of 1939 and there are pictures by him in buffalo and new york (museum of modern ART).

dove, arthur (1880-1946)
was connected with the stieglitz gallery and painted in an extremely personal abstract style.

eakins, thomas (1844-1916)
was an american painter, principally of portraits. eakins studied in paris with gérome, later training the factual vision acquired from his master on his native philadelphia by painting his friends at their favorite pursuits and executing penetrating portrait studies. his paintings are well represented in united states museums.

feininger, lyonel (1871-1956)
was born and died in new york, but is really a german cubist. he best exemplified the constructivist aesthetic doctrine in the transparent fluidity of his colors, in interpenetrating segmented planes, which create a pure and crystalline atmosphere. In 1937 feininger left germany and went to new york. the elegance of his precise, geometrical work with its strong romantic feeling appears closer to american precisionist artists such as demuth than to german expressionism.

glackens, william (1870-1938)
american painter and illustrator born in philadelphia. pupil of pennsylvania academy of fine ARTs. member of the ashcan school.

gorky, arshile (1904-1948)

was born vosdanig adoian in turkish armenia, fled before the turks in 1915 and finally arrived in the united states in 1920. his life began in tragedy (his mother starved to death) and ended in suicide following a cancer operation in 1946 and a car crash in which his neck was broken. he worked in new york from 1925 and began to paint cubist pictures in 1927. his earliest works are imitations of cezanne, later of picasso and finally of miro. his *ARTist and his mother* is an able pastiche of picasso's style. in 1935 and 1939 he painted two large murals on the theme of aviation but both are lost. in 1940 he met matta, who inspired him with surrealist ideas similar to those of miro. other american museums with pictures by gorky include; baltimore, buffalo, chicago, new york museum of modern ART, oberlin ohio, san francisco, tucson arizona university, and utica new york. whitney museum in new york has *ARTist and his mother*.

graves, morris (1910-)

was interested in abstract expressionism, with its concern with the act of painting as a prime instrument of expression, developed in new york during the early 1940's. large in size, unconcerned with illusionistic depth, action painting aims at transmitting or suggesting inner emotion. the abstract 'black on blacks' of ad reinhardt are his own distinctive contribution. clyfford still helped inspire the pacific (or west coast) school whose visionary ideals are reflected in the ART of morris graves.

grosz, george (1893-1959)

was the leading german satirical draughtsman of this century. at first he was a caricaturist for satirical papers. in 1918-1920 he was a member of the dada movement; in 1925 he joined the neue sachlichkeit movement. his ferocious satires attacked the social corruption of germany (capitalists; prostitutes; prussian military caste; nazi brutality.) he settled in the united states in 1933.

hartley, marsden (1877-1943)

he exhibited at '291', the photo-secession gallery of alfred stieglitz.

hicks, edward (1780-1849)

was one of the astonishing number of talented primitives who were at work at this time. he was considered the best of these; a quaker, visionary in spirit and a sign painter by trade whose many versions of the peaceable kingdom were painted for his co-religionists in his native pennsylvania.

hopper, edward (1882-   )

was one of a number of important figurative painters in the 1920's and later. he evoked the small town and the provincial city, suburban streets and isolated deserted houses.

indiana, robert (1928-   )

was born in indiana and studied at john herron ART institute in indianapolis, the chicago ART institute, and the edinburgh college of ART. he feels that pop is instant ART. a super realist he wants to transmit a psychological and emotional jolt through use of a hard edge style.

lichtenstein, roy (1923-   )

was born in new york and earned his master's degree in fine ARTs at ohio state university. his works are abstractions out of the figurative, without losing the content of the subject matter. the comic book motive using the ben day dot technique to form a large blow-up.

marin, john (1870-1953)

was an american painter, best known for his semi-abstract watercolors, often of the sea. he began as an architect, but in 1905 he went to paris where he was influenced by whistler. he returned to the united states from europe in 1911 and in 1913 he took part in the armory show. has works in new york metropolitan museum, washington phillips museum and many other american museums.

matta (i.e. roberto sebastiano matta echaurren) (1912-   )

is a chilean painter, now living in paris, who began as an architect (1934) under le corbusier. from 1938-1947 he was a surrealist, and is still a freudian. he went to the united states in 1939, where he met duchamp. there are works by him in new york museum of ART.

motherwell, robert (1915-   )
an american abstract expressionist painter who began by studying philosophy at harvard. he has said, "without ethical consciousness, a painter is only a decorator." after a visit to europe in 1938 he exhibited with the surrealists in new york (1939) and later associated with pollock, kooning, and rothko (with whom he founded an ART school.) he was editor (1944-1957) of the important "documents of modern ART" series.

oldenburg, claes (1929-   )
was born in sweden but brought up in chicago. a graduate of yale he started ART late in life and studied at the chicago institute of ART. his works have primarily been concerned with soft sculpture made with vinyl stuffed with kapok.

o'keefe, georgia (1887-   )
did abstract studies of flowers, skulls, etc.

ozenfant, amedee (1886-   )
is a french painter who invented purism. in 1928 he published "ART" (english edition in 1931 as "foundation of modern ART"). he has lived in new york since 1938. there are works in london (tate) new york museum of modern ART and paris museum d'ART modern.

pollock, jackson (1912-1956)
the chief american exponent of action painting, made studies for his apparently unpremeditated works done on continuous lengths of canvas tacked to the floor and later cut up with selective care. he abandoned the use of brushes in 1947, pouring the paint straight on to the canvas, but in 1953 he began to employ brushes again. he used metallic paints and ordinary commercial synthetic enamel and plastic paint, with results that are already unfortunate. there are examples in london (tate), rio de janeiro, and many united states museums.

quirt, walter
local ARTist. painter. instructor at university of minnesota.

rattner, abraham (1897-   )
american painter. member of fellowship of pennsylvania academy of fine ARTs.

ranschenberg, robert (1925-   )

forerunner and a strong influence as to where ART goes after abstraction. his work is so personal, so fraught with free association and poetic juxtaposition, that he appears too romantic an ARTist to be considered "pop".

rosenquist, james (1933-   )

was born in north dakota and studied at the ARTs students league in new york. his work is reminiscent of a wide-angle movie screen which is related to the commercial billboard.

rothko, mark (1903-   )

was born in russia but came to america in 1913. he began painting in 1926 and is now known for his large abstract pictures which consist of horizontal bands of color with fuzzy edges. there are examples in london (tate), new york museum of modern ART and other american museums.

rudquist, jerry (1934-   )

born in fargo, north dakota. instructor at macalaster college. winner at minnesota biennials. painter

ryder, albert pinkham (1847-1917)

was the most original and poetic late 19th century american romantic painter, and the counterpart to edgar allen poe, whom he admired. he was born in new bedford, massachusetts, a whaling port from the world of moby dick, and all his life he was haunted by the sea although he actually lived in squalor in new york. his marine and landscape paintings have a visionary and brooding quality and were very fine in color, but his deficient technique and the loading of layers of rich, enamel-like pigment have caused them to deteriorate badly. he traveled to europe, but seems to have been unaffected by it. there are works by him in many american museums including; chicago, cleveland, detroit, new york metropolitan museum, st louis, toledo, ohio and washington (ng, corcoran and phillips). it is said that many forgeries also exist.

sargent, john singer (1856-1925)

was born in florence of american parents. studied in paris and eventually settled in england, dividing his time between that country and the united states. he is best known for his portraits with their skillful brush work and for his brilliant watercolors.

segal, george (1926-)
born in new york and graduated from new york university and rutgers. his works seem to relate more to painting than to sculpture. his life size, dead white, plaster figures are set in an imaginary boxed area of space, like a shop window display.

shahn, ben (1898-)
was born in lithuania, but came to the united states in 1906 and became a characteristically american exponent of social realism. his use of photographic realism of detail and some of the technical devices of advertising set him apart from most modern american painters, but his ART has always been a vehicle for ideas. he also has written on ART.

tobey, mark (1911-)
was born in centerville, wisconsin and originally worked as a commercial ARTist. he taught at dartington hall school in england, 1931-1938, but visited japan and china in 1934. he was much influenced by chinese calligraphy (taking lessons from a chinese ARTist) and was also one of the first american intellectuals to become interested in zen. from 1935 he painted abstract pictures in what is called "white writing" based on chinese calligraphy: the effect is reminiscent of, but more fastidious than, the calligraphy of Pollock. these white squiggles have been described by an admirer as: "looping over layers of interpenetrating space... holding icons in a shifting web." since 1939 he has lived in seattle. there are works in london (tate) and new york museum of modern ART.

warhol, andy
born in pittsburgh, began as a commercial ARTist which led to his stenciling and silk-screening of replicas of soup cans, brillo crates and other such common everyday images. leader of underground movie group.

wesselmann, tom (1931-)
born in cincinnati, ohio. went to ART academy and cooper vinson school of ART. his works are charged with their very own presence. his works are in "high relief" but retain the space of a flat painting, and do not necessarily invite one to become physically involved in them.

west, benjamin (1738-1820)

came of pennsylvania quaker stock, and learned to paint in america. in 1760 he went to italy and spent three years in rome, florence, bologna, and venice. he enjoyed the prestige of novelty--american painters were unknown and the blind cardinal albani asked if he were not a red indian. he was much influenced by the neoclassical style of mengs and gavin hamilton, and evolved,partly through them and partly because of his lack of academic training, history pictures on a smallish scale. there are works in the royal collection, leeds, london (tate, v & a, foundling hospital, national merit museum), and a great number of american museums.

whistler, james (1834-1903)

was born in lowell, massachusetts, and attended west point military academy. failing there, he worked as a navy cartographer, which at least taught him the technique of etching. whistler liked to emphasize the aesthetic nature of his pictures in conscious reaction against the dominance of the subject in victorian painting, hence his choice of titles like symphony or nocturne.

wood, grant (1892-1942)

was one of a number of important figurative painters in the 1920's and later. he was famous for his satirical daughters of revolution. and the american gothic.

wyeth, andrew (1917-)

works with detailed, intense and haunting studies of people where every blemish is recorded. they have a hallucinatory quality.

sloan, john (1871-1951)

was the outstanding artist of the eight group of painters known as the ashcan school, who opposed the narrow provincialism of other contemporary ARTists.

european painting

arp, hans (1887-   )

a french painter and sculptor. in 1916 he was one of the co-founders of dada. there are works by him in new york museum of modern ART and london (tate).

balla, giacom (1874-   )

signed the futurist manifesto of 1910 and painted futurist pictures for a while, including the only amusing one produced by that dreary movement... *the dog on a leash*. he later returned to more traditional forms of expression.

beckmann, max (1884-1950)

was one of the leading german expressionist painters who taught at frankfurt until his dismissal as a "decadent" ARTist in 1933. he went to amsterdam from 1938 to 1947 and then to america where he died. his nine triptychs, painted from 1932 onwards, are his best works and show that the main influences on his style were bosch and german primitive paintings. he is represented in many american museums and now in german museums as well.

bonnard, pierre (1867-1947)

was the friend of vuillard, and with him was one of the nabis until about 1905 they both adopted a more impressionist technique and outlook, known later as *intimisme*. there are works by him in birmingham (barber), chicago, glasgow, london (tate), new york museum of modern ART, paris museum d'ART modern, toledo ohio and elsewhere.

buffet, bernard (1928-   )

is a french painter of extreme precocity who made his name as early as 1948. he is the principal figurative painter in paris and was much influenced in the 1940's by the movement known as *miserabilisme*; sad greys, thin spiky forms, and an obtrusively angular signature, characterise his style. in later years he has painted views of london, paris and new york as well as series of toreadors and st. joan of arc. there are works in cincinnati, new york (brooklyn) and toronto as well as london (tate) and paris museum d'ART moderne.

braque, georges (1882-1963)

learned to paint as an apprentice in a decorator's business, hence his superb technique. he was at the ecole des beaux-ARTs in le havre and later in paris, but preferred to work on his own. he was friendly with dufy and friesz (both were from le havre) and by 1906 was in the fauve circle, but by 1909 he knew picasso well, and with him had started to work out the basis of a new approach to painting which developed into cubism. by the outbreak of war in 1914 this close collaboration was at an end; when braque resumed painting in 1917 he tried to pick up synthetic cubism where he had left off, but by 1920-1921 a less arbitrary spatial composition and not so much a return to reality as an acknowledgment of its existence, led to the ample, vigorous, splendid still-life and figure compositions, with a perfection of balance and harmony between the color and the design, which he continued to develop for the rest of his life.

he also executed a certain amount of sculpture, incised plaster plaques, and plaster reliefs. there is a small body of graphic work--between forty and fifty lithographs, some woodcuts for book illustration, and some etchings for which the drawings were originally produced in 1931 as illustrations for hesoid's "theogony." there are works in basle, buffalo, copenhagen, detroit, frankfurt (stadel), glasgow, le havre, london (tate), new york museum of modern ART, and elsewhere, including french museums.

chagall, marc (1887-   )

was born in vitebsk, trained in st. petersburg and came under the influence of bakst and the ballet. he was always an independent ARTist, and returned often to the peasant scenes and folklore of his native russia and to eastern european jewish folklore for his inspiration. his fantastic scenes with their people and animals soaring above the rooftops, and their brilliant color, haunt the imagination. the work of this notable member of the "school of paris" is extremely influential. in 1961 he completed a series of stained glass windows of the twelve tribes of israel for a synagogue near jerusalem.

cezanne, paul (1839-1906)

was probably the greatest painter of the last 100 years, and the most important single influence on modern painting. born in aix en provence, the son of a wealthy banker and friend from childhood of zola, he came to paris in 1861. his early works, influenced by daumier and delacroix, reflect his basic romanticism, being theatrical in subject matter, violent in treatment, lurid in color and solid in impasto. his great achievement lay in a subtle analysis of color and tone quite different from the impressionist capturing of surface impressions. it was a laborious analysis because he sought to use coloring as a means of modeling and as the expression of the underlying form of visible objects. he wanted to show that drawing and painting were not distinct from one another and that "when color is at its richest form it has its plenitude."

da vinci, leonardo (1452-1519)
is one of the outstanding painters of the cinquecento. his mastery of the manifold technical and theoretical ARTistic problems made him able to create a new style and form. his ideas were as applicable to science and philosophy as they were to ART. his multiplicity of accomplishments in the fields of painting, sculpture, engineering, mathematics, hydraulics, aeronautics, anatomy, ballistics, inventing and writing gave his works a universality which those of the early experimenters did not possess.

degas, edgar (1834-1917)
was born in paris of a wealthy family. he studied at the ecole des beaux-ARTs under a pupil of ingres, whom he knew and deeply admired. his early works--family portraits and some history pictures--suggest that he was to develop into an academic painter in the ingres tradition. he recorded the manners and movements of a society which he observed almost as if it were another world, and these figures were treated as the material of his investigations into light, color and form as much as the pastel or paint he used. technically, he was one of the greatest experimenters and innovators.

derain, andre (1880-1954)
was a pupil at the academic julian. he later met matisse, vlaminck, braque and picasso. his true ARTistic personality came to the fore in 1903 and then in his fauve period; from a concern with line and color, he moved on to a preoccupation with form and structure. cubism, archaism, his "gothic" period of stylization, his classicism which was more roman than greek--these were the later stages of his career.

duchamp, marcel (1887-   )
was one of the original dadaists. before the invention of dada he had shocked new york with his nude descending a staircase in the armory show in 1913. after this more futurist than cubist work, the aesthetics advocated by braque and picasso had no further part in his ART.

dufy, paul (raoul) (1877-1953)

worked in a sub-impressionist manner until 1905 when the impact of the fauve movement impelled him to adopt simplified form and bright color. he designed textiles and ceramics and developed a gay, light-hearted, decorative style, eminently suited to his range of subjects--esplanades, race-courses, regattas, etc.--and used odd tricks of technique, such as white patches (neutrals) for shadows, and a rapid, modish, calligraphic draughtsmanship.

el greco (domenico theotocopoulos) (1541-1614)

was born on the island of crete. although trained in venice, perhaps by titian, and having worked in rome, he was more nearly byzantine than italian in his use of symbol, color, and treatment of space. he was popular in his own day as a painter of devotional panels. "rediscovered" in the twentieth century by ART lovers, his work has more meaning today than much of the court painting of spain with its narrow conventionalism and insipid mannerism. his orientalism is apparent too in its emotional intensity as opposed to the rigidity and the formal hieratic quality characteristic of spanish customs and ART.

ernst, max (b. 1891)

introduced the dada movement into cologne in 1919. he also made collages and frottages and from 1924 was a surrealist. he has published collage novels. there are examples in hartford, connecticut, manchester and new york museum of modern ART.

gauguin, paul (1848-1903)

was born in paris. part of his childhood was spent in peru, whence his mother's family came, and from 1865 to 1871 he was at sea. he became a stockbroker in 1871 and a sunday-painter who collected the works of the impressionists and joined in their exhibitions (1881-1886). he gave up his job in 1883, and after many vicissitudes separated from his family and went to live in britanny at pont-aven and le pouldu, where he worked from 1886 to 1890, except for visits to paris, a trip to panama and martinique in 1887, and a disastrous stay of two months with van gogh in arles in 1888. in 1891 he went to tahiti, returned to paris in 1893 for lack of money, but went back to the south sea islands in 1895. his health was failing and he had been seriously hurt in a brawl with sailors in britanny in 1894. his remaining years were spent in poverty, illness and continual strife with the colonial authorities through his championing of native causes. he died at atuana in the marquesas.

his early works may be ranked with those of the impressionists, particularly with pissaro and cezanne, but after 1886 when his works hung in the eighth and last impressionist exhibition with those of seurat, he endeavored to introduce more color and this tendency became more marked after his voyage to martinique. in 1888 at pont-aven he met emile bernard, the influence of whose knowledge of medieval ART joined with gauguin's interest in primitive sculpture, japanese, romanesque, and far and near eastern ART, to encourage him to abandon impressionism and all attempts at the representation of nature in favor of synthetism. his rejection of western civilization led to his departure for tahiti, and to his efforts to express through an ART free from the conventions of the naturalistic tradition the simplicity of life among primitive and unspoiled peoples. His influence has been enormous, since he is one of the main sources from which non-naturalistic 20th century ART has emanated.

gris, juan (1887-1927)

left madrid in 1906 and settled in paris, living near picasso. at first he broke up the objects in his pictures into many-facetted planes, but by 1911 he was using the analytical form of cubism, and later used collage and synthetic forms, with an understanding and an originality that preserve him from inclusion among the more obvious picasso followers. he did some work for diaghileff in 1922-1923, but found the world of ballet too hectic. his "possibilities de la peinture" was given as a paper at the sorbonne in 1924.

kandinsky, wassily (1866-1944)

was born in moscow but trained in munich after abandoning a legal career. he painted his first purely abstract work in 1910 (one such is in the tate gallery, london), and was therefore one of the founders of "pure" abstract painting. in 1911 he was one of the founders of the blaue reiter group and in 1912 he published a book which was translated into english in 1914 as "the ART of spiritual harmony." he returned to russia from 1914-1921 and then went back to germany and taught at the bauhaus from 1922, again coming into contact with klee. in 1933 he went to france.

klee, paul (1879-1940)

was a swiss painter and etcher whose ART of free fantasy, perhaps the most poetic of modern times, is best defined in his own words as "taking a line for a walk." he was trained in munich and went to italy (1901-1902), after which he returned to switzerland and began etching. his early graphic work was influenced by blake and beardsley as well as goya and later ensor. he worked in germany from 1906 until 1933, teaching for many years at the celebrated bauhaus in weimar and dessau, and later at dusseldorf academy. he was an impassioned teacher and many of his pedagogical sketchbooks and theoretical writings have been published. from 1911 he was associated with the blaue reiter ARTists and was especially close to kandinsky, feininger, and jawlensky (they were known from 1924 as the "blue four"). In 1914 he went to tunisia with macke, an experience which revealed a new world of color to him. from the 1920's he was famous, and no fewer than 102 of his works were confiscated from german galleries by the nazis. there are works in most galleries of modern ART now, and there is a klee foundation in berne.

kokoschka, oskar (b. 1886)

is an austrian painter who developed between 1908 and 1914 a highly imaginative expressionist style. he taught at the dresden academy from 1919; was influenced by painters who had worked in the brucke group; and from 1924 to 1931 traveled widely in europe, north africa, and the near east. he lived in vienna from 1931 to 1934, and in england from 1935 to 1953. his portraits, landscapes and,chiefly, town views, often seem almost in bird's-eye view; are vivid in color and of a restless energy of drawing. he has also painted many allegories, inspired by legends or, more commonly, by ideological themes; one of these, in london, is a large ceiling decoration. there are works in edinburgh (ng), london (tate), new york (museum of modern ART) and many other museums of modern ART.

leger, fernand (1881-1955)

met braque and picasso in 1910 and from his early block-like figures eventually evolved a form of curvilinear cubism, dependent on the dynamic shapes of machinery and their geometrical bases: cones, cylinders, cogged wheels, pistons, and brilliant metallic surfaces. these forms also influenced his massive, robot-like figures and increased the effect of his clear greys and his strong, unbroken colors. he designed for the swedish ballet in 1921-1922 and in 1924 made the first abstract film, le ballet mecanique, from actual objects, not animated abstract drawings as had been used by eggeling and richter some seven years earlier. among his last works were the huge murals for the united nations building in new york. there are works in london (tate), new york museum of modern ART, paris museum d'ART modern, and there is a muesee leger at biot, cote d'azur.

manet, edward (1832-1883)

was the precursor of the impressionist movement. he was more traditional than other impressionists. he took notice of changes in local color, reflection of light and different sources of illumination.

marc, franz (1880-1916)

was a german expressionist painter, associated with macke and kandinsky in the blaue reiter. his chief subjects were animals, and his variants on the theme of the blue horse are perhaps his best known works. he met delaunay in paris in 1912 and his last works in 1914 are more abstract. he was killed at verdun.

matisse, henri (1869-1954)

was the principal ARTist of the fauve group. he was a pupil of the academician bouguereau for a few months in 1892, and from 1892 to 1897 was a pupil of gustave moreau, in whose studio he met rouault, marquet, manguin, camoin, and piot. he copied in the louvre, and was strongly influenced by impressionism. his dinner table (la desserte) of 1897 shows him working close to bonnard and vuillard. in 1901 he first met vlaminck in the company of derain, whom he already knew. he tried the divionist technique about 1899 but turned to cezanne by 1901-1903, painting in strongly modeled form and dark tones to offset the rather superficial quality of signac's bright color. the influence of signac was renewed in 1904 when matisse stayed with him in the south of france, and this renewed contact probably started the train which led to the explosion of color by the fauve movement. this came in 1905, but in the midst of the general abuse matisse acquired patrons in the stein family who encouraged him, bought pictures and encouraged other americans to buy and later the russians shchukin and morosov became his chief patrons. exhibitions in germany followed.

miro, joan (b. 1893)

is a surrealist painter of spanish origin who lived for some time in the united states. in 1925 he took part in the first surrealist exhibition and with dali was recognized as the leading spanish surrealist. his work has tended to become abstract, although he says; "for me a form is never something abstract; it is always a sign of something. it is always a man, a bird, or something else. for me painting is never form for form's sake." he designed the ballet jeux de enfants in 1932. there are works in several united states museums, london (tate), paris museum d'ART modern, and elsewhere.

modigliani, amedeo (1884-1920)

was known as "modi" for short, from which by natural corruption the french referred to him as "un peintre maudit" -and those who were like him were equally accursed. he was born in leghorn of a distinguished italian-jewish family and had his first training in italy before going to paris in 1906. he spent the rest of his life there, working at first in a manner influenced by toulouse-lautrec, but his *cellist* of 1910 won him recognition and shows that his real style was based on african sculpture, cezanne, and picasso and, above all, his italian heritage. he was a superb draftsman, and all his work contains echoes of botticelli, of sienese trecento painters, and of some of the mannerists, so that he is truly the greatest italian ARTist of the 20th century, and not a french painter at all. he was handsome, amorous and addicted to drink and drugs. he said, "i am going to drink myself dead," and he did. there are paintings or sculpture by him in buffalo, chicago, london (tate, v & a, courtauld inst.), new york museum of modern ART, paris museum d'ART moderne, philadelphia, sao paulo, washington (phillips), and elsewhere.

mondrian, piet (1872-1944)

was a dutch painter who went to paris in 1911 and abandoned his realistic landscapes for cubist one. in 1914 he returned to holland but he lived in paris 1919-1938, then in london, and he went to new york in 1940. his form of abstraction was a peculiarly rigorous one known as neo-plasticism, which consists principally of restricting forms to purely geometrical shapes, set at right angles to the horizontal or vertical axis and colored in the three primary colors, and white, black or grey. the only enlivening touch he permitted himself was in his titles - *boogie woogie* for example. as might be expected, he was a prolific writer (often in de stijl) and his *plastic ART and pure plastic ART*, 1937, summarizes his theories.

monet, claud (1840-1926)

was the leading member of the impressionist group, and the one who longest practiced the principles of absolute fidelity to the visual sensation and painting directly from the object, if necessary, out of doors. cezanne is said to have described his as, "only an eye, but my god what an eye!" and this description is certainly true in that his constant search for verisimilitude let at times to a neglect of form. he was born in paris but went to le havre as a child. there he met boudin, whose work he did not like, and was persuaded by him to become a landscape painter (1856-1858): at this time he also bought his first japanese prints, then newly monet (continued)

coming into europe. in 1859 he went to paris to study, meeting pissarro in the atelier suisse. from 1860 to 1862 he was in algeria as a conscript. in 1862 he met jongkind who influenced him considerably and he returned to paris. there he met most of the major ARTists of his own time; in 1862, bazille, sisley, and renoir; in 1864, courbet; in 1865, cezanne and whistler; and in 1866, manet, whose work he had earlier admired. then and for many years to come he was extremely poor. in 1870 to escape the franco-prussian war he came to london, where he painted some views. in 1871, with pissarro, he visited the national gallery and the v & a, where they studied turner and constable, but, according to monet himself, they were not tremendously impressed. he returned to paris via holland and in 1872 he visited le havre where he painted two views called impression. when one of these views was exhibited at the first impressionist exhibition in 1874 it was used derisively to name the whole movement impressionism. during the 1870's and the 1880's he gradually became known and for the last thirty years of his very long life he was generally regarded as the greatest of the impressionists. from about 1890 he began to paint series of pictures of one subject, the first being the poplars and the haystacks, representing them under various conditions and at different times of day. other series are those of rouen cathedral (1892-1895), of the thames (these were certainly finished in france, as by now he had given up the original practice of painting exclusively from nature) (1899-1904), the second london series (1905) and the venice series (1908). the most famous of all, the water-lilies painted in the elaborate garden he had made for himself. he painted these over and over again, but the most important are the very large ones begun in 1916 and retained by him until his death. they were originally painted for the state and are now in a special museum (paris, orangerie), and it has recently been claimed that these shimmering pools of color, almost totally devoid of form, are the true starting point of abstract ART, or at least certain forms of it, particularly that now called abstract impressionism. they were, however, painted after cubism had been invented and can be seen equally as the logical outcome of monet's lifelong devotion to the ultimate form of naturalism, truth of retinal sensation. he was enormously prolific, and many museums possess works two very rich collections are in paris (museum de l' impressionnisme) and in boston.

munch, edvard (1863-1944)

a norwegian painter, he was one of the forerunners of expressionism. his most formative years were spent in paris and berlin where a large exhibition of his work as early as 1892 was a formative influence on much german painting. formally, he was much influenced by gauguin but his subjects (especially his *frieze of life* project) deal with basic themes of love and death for which he sought pictorial equivalents. he was friendly with strindberg and his ART, though sometimes powerful, is always neurotic and frequently hysterical. his graphic works were perhaps even more influential than his paintings. about 1,000 of his pictures are in the munch museum in oslo, but there is also one in london (tate).

picasso, pablo ruiz y

was born in malaga in 1881. he was the son of an ART teacher. the boy showed exceptional talent at an early age and the ARTistic current flowing into barcelona (where the family had settled) from france and northern europe stimulated him into trying out the personal language of munch, toulouse-lautrec, renoir, and other northern lights. in 1900 he visited paris for a short time and returned in 1901 to join the cohort of young bohemians attracted to the capital by the stimulating and exciting atmosphere then prevailing in the ARTs. lautrec, gauguin, van gogh, steinlen, and late impressionism flit across his canvases in a bewildering medley and leave behind a passion for blue, which became the dominant color for his portrayal of the squalid tragedy of the paris streets - the beggar, the harlot, the sick child, the hungry. through this welter of contemporary influences ran the steady current of the things he had grown up with: the elongated forms of catalan gothic sculpture and the italian mannerism, the simplified color and straightforward approach of velazquez , zurbaran, and goya. these also inform his pictures of actors, mountebanks, and harlequins, whose tender fawns and pinks replace the earlier drab and sad colors. until now nothing unusual had transpired; even his interest in iberian sculpture in 1906, and the radical simplification of form and color it led to, give little hint of the position when the fauve outbreak was at its height. picasso took no part in this. he was questioning the whole basis of painting and was therefore unable to follow still further the road from impressionism to the dissolution of form and its translation into color and imaginative feeling.

picasso (continued)

picasso's reply to matisse's "composition is the ART of arranging in a decorative manner the various elements at the painter's disposal for the expression of feelings", was to turn to cezanne whose petite sensation never had any luck with pure decoration and whose composition was based on the rigorous discipline of the relations of form and space on a two-dimensional surface. picasso's les desmoiselles d' avignon (new york, museum of modern ART) of 1907 was begun in the vein of his harlequin series, but ended as a semi-abstract composition, in which the forms of the nudes and their accessories are broken up into planes compressed into a shallow space. the influence of negro sculptures, which first appears in the desmoiselles, also fit in with his quest for the expression of form and helped by the bizarre nature of their forms to release him from the tyranny of the representational tradition in ART. in 1907 he met braque, who had drifted into the fauve circle and out of it again. in 1909 they found that they faced the same problems and were striving to solve them in the same way. both rejected decorative arabesques and bright, sensuous color and were striving to devise a pictorial language which would define volumes and their relationships without destroying the flat surface of the picture, and without descending to the imitation of accidental and superficial appearances. together they evolved what is now called analytical cubism. by 1912 color had begun to creep back among the greys, olive-greens, and drab browns, and actual objects - a piece of cane seating, a newspaper heading - were imported so as to stress by their complaisant acquiescence in becoming an element in a design the modest role of nature in the ideal, and also to serve as an example of the way in which nature may be recreated. collage was a natural extension of this. objects could be literally reconstituted with bits of wood, wire, paper, and string; their forms distorted by the ARTist into a flat composition whose inherent third dimension is alluded to at the same time as it is suppressed. although picasso, having started this, did not cause it any more than he did that of surrealism, born from the juxtapositiposition of recognizable objects and reconstituted forms.

at the moment when war broke out in 1914, braque and picasso were separated by a quarrel (the breach was never healed) and both had consistently held aloof from the host of minor ARTists who had by now realized that cubism was the coming thing and had climbed aboard the bandwagon. these ARTists were; gleizes, metzinger, delaunay, marcoussis, duchamp-villon, picabia, lafresnaye, and derain.

picasso (continued)

from 1915 he had shown his interest in ingres' drawings by precise and restrainedly stylized pencil drawings, and his connection with the diaghileff russian ballet in rome in 1917 led to works showing a return to traditional vision, with parallel works in a glitteringly sophisticated cubist idiom. finally, contact with the antique and with roman classicism ushers in a series of paintings and drawings of monumental female nudes, at first almost motionless and then, by 1923, galvanized into terrifying movement which distorts them into frightening caricatures before dissolving them, via calligraphic curves and lines, into the convulsive and repellent distortion of the three dancers of 1925 (london, tate). for the next ten years picasso developed these distorted and disquieting figures through what is generally called the metamorphic phase, in which he was perhaps somewhat influenced by miro and tanguy.

by the early 1930's he was rather taking the wind out of matisse's sails with a series of nudes - odalisques almost - which combine brilliance of color with flat pattern of a violent intensity; soon after he began the series of bullfighting subjects which culminated in the imagery present in guernica (1936: on extended loan to museum of modern ART, new york). this huge composition prompted by the spanish civil war, expresses in complicated iconography and personal symbolic language comprehensible after careful study, the ARTist's abhorrence of the violence and beastliness of war. This dark mood persists in the dislocated forms and frightening imagery of his work during the second world war.

he remained in paris during the occupation and gradually acquired by his aloofness the stature of a symbol of resistance. since the war he has lived chiefly in the south of france, where he devoted himself to ceramics for some time, but he has also painted a large mural for the unesco building in paris.

no man has changed more radically the nature of ART. like giotto, michaelangelo, and bernini he stands at the beginning of a new epoch. most museums of modern ART throughout the world have examples of his work.

pissarro, camille (1831-1903)

was born in st. thomas in the west indies, the son of a creole mother and father of portuguese-jewish descent. he worked as a clerk in his father's general store until 1852 when he ran away to venezuela with a danish painter, after which his reluctant parents resigned themselves to his becoming an ARTist.

he arrived in paris in 1855, in time to see the great exhibition at the world's fair (when courbet exhibited his rejected pictures independently.) soon after he met corot, by whom he was deeply influenced, although by 1866 corot disapproved of the way that the younger landscape painters were going, and was particularly severe about pissaro's connection with courbet and manet. he met monet in 1859, and in 1863 several of his pictures were in the salon des refuses. from 1866 to 1869 he worked at pontoise on landscapes painted entirely in the open. he could sell almost nothing and he and his family lived in the most cruel poverty.

in 1870 he fled before the german invasion, first to brittany and then to london, where eventually news reached him that his house in louveciennes had been used as a butchery by the invaders, and his store of 200 to 300 pictures used as duckboards in the muddy garden.

in 1872 cezanne joined him in pontoise and worked with him, with a radical effect on his own style. in 1874 he took part in the first impressionist exhibition: he was the only one who exhibited in all eight exhibits and it was he who introduced first gauguin, then seurat and signac into the impressionist exhibitions, with consequent disruption among the group. he was much influenced from 1884 by seurat's theories of optical mixture, which he used until 1888, when he declared that the method "inhibits me and hinders the development of spontaneity of sensation". from 1895 the worsening of his eye-trouble forced him to give up working out of doors, and he painted many town views from windows in paris. he died blind.

his production was enormous and in all techniques - chiefly oil painting, but he also used pastel, gouache, drawing in all media, etching, and lithography. of all the impressionists he was the most consistent; he never compromised, he did his best to compose the bitter quarrels which broke out around him, he never blamed any for their defections, intolerance, impatience, and occasional spats. in return they gave pissarro (continued)

him respect and admiration for his principles as much as for his ART. there are paintings by him all over the world in almost every museum of modern ART. his son lucien (1863-1944) followed in his father's stylistic footsteps. he lived in england, where he founded the eragny press (named after his father's final home) in 1896 and exerted great influence on book-illustration and printing in this country. his daughter, known as orovida (b. 1893), is also a painter.

raphael (1483-1520)

was the youngest of three great creators of the high renaissance and was the most eclectic of great ARTists. he was the son of the painter giovanni santi, and his real name was raffaello sanzio. his father died in 1494 and raphael's earliest years are obscure, but by 1500 he was working in the shop of perugino probably on the frescoes at perugia; and in this year he received his first recorded commission, now lost. probably at this time he painted the knight's dream (london, ng). he was thus a prodigy, but what is more extraordinary, in 1500 he was 17 while leonardo da vinci was 48 and michaelangelo 25; and yet in less than 10 years the provincial youth, who had not had their advantage in being born and brought up in florence, was generally admitted to be their equal. the decade 1500-1510 not only saw the emergence of raphael as a great master, it also saw the creation of the high renaissance, in which raphael played a leading part and which hardly survived him.

his early works show the influence of perugino and not much else, as in the mond crucifixion of c. 1502/3 (london, ng), but the betrothal of the virgin (lo sposalizio), his first signed and dated work (1504; milan, brera), although derived from a perugino already shows powers of composition and draughtsmanship far in advance of perugino. at this point in his career raphael went to florence, where he must have found that all he knew was old-fashioned and provincial. he began at once to learn all he could from the florentines, and a whole series of drawings and paintings demonstrates how rapidly he assimilated all they could teach him. from leonardo's cartoons of the virgin and child with st. anne he developed a series of small madonnas (e.g. those in florence, paris, and vienna); from the mona lisa he learned a new portrait type which he used for his maddalena doni (florence, pitti), while leonardo's experiments in chiaroscuro raphael (continued)

are the reason for the dark background in the madonna del granduca (florence, pitti). michealangelo's influence is principally to be found in a new severity and power in drawing, but the deposition (1507: rome, borghese) contains several michelangelesque motives, not all of them digested. raphael seems also to have come into close contact with fra bartolommeo at this time.

probably towards the end of 1508 raphael went to rome, perhaps because he had heard that the pope julius II, was having new apartments decorated. by 1509 he was certainly employed in the first of these rooms, the stanza della segnatura, and he rapidly became the principal master employed in the vatican, with the sole exception of michelangelo who was then painting the sistine ceiling. at 26 raphael was in the front rank, and there he remained for the rest of his short life. the stanza della segnatura is the first of the series of relatively small rooms, known collectively as the stanze, which raphael and his pupils and assistants decorated for julius II and leo X. it was painted between 1509 and 1511, the theme of the room being the human intellect. the two principal frescoes represent philosophy and theology and are known respectively as the school of athens and the disputa, or disputation concerning the blessed sacrament. these two frescoes, balanced and serene, calm, and classically poised, are perhaps the best examples of the high renaissance at its apogee. the second stanza, that of heliodoros, (the stanza d'eliodoro) has a different theme - divine intervention on behalf of the church - and in keeping with this more dramatic theme, the style is more dramatic and colorful. this may be due to the fact that the stanza was painted between 1511 and 1514 and michelangelo's sistine ceiling was unveiled in 1512.

the principal subjects are the expulsion of heliodorus from the temple, the liberation of st. peter, and the miracle of the mass at bolsena. the remainder of the decorative scheme - the stanza dell'incendio and the sali di costantino - was almost entirely executed by raphael's numerous and well-trained assistants, and the exact amount of raphael's responsibility is a matter of controversy. the principal reason for this is that raphael was increasingly overwhelmed with work not only in commissions for pictures from the pope and from kings and princes, but also in that he succeeded bramante (d.1514) as architect of the new st. peter's, and he was also engaged on innumerable other tasks.

raphael (continued)

the most important of these were the frescoes in the farnesina, rome, and the tapestry cartoons designed in 1515-1516 and intended to be used for tapestries to hang below the 15th century frescoes on the walls of the sistine chapel. the surviving tapestries are still in the vatican, and the original cartoons for seven of them are in the v & a in london (loaned from the royal collection).

at this time he also supervised the execution of the series of old testament scenes in the loggie of the vatican: these were completed in 1519, but no more than the general design can be attributed to raphael. the *sistine madonna* (dresden) probably dates from c. 1513 and is unusual in that it is all by raphael himself and yet it is not known why he should have spent so much trouble on it, apparently for a small religious community in piacenza. it has been suggested that it was carried at julius II's funeral. it shows by comparison with any of his florentine *madonnas*, how his style had become larger and simpler and also how the very conception of the madonna had changed, from the simple naturalism of the 15th century thought more appropriate to the mother of God - hence the figure floating in the clouds.

the last major work on which raphael was engaged was the *transfiguration* (vatican), commissioned in 1517 but still unfinished when he died in 1520. it was completed after his death, partly at least by his heir and most important pupil, giulo romano, and it is controversial to what extent the mannerism discernible in the picture is due to giulio. the basic design, (including the twisted figure of the woman) and all the drawings, however, are certainly by raphael and it seems likely that his ART was on the point of taking a new direction. when he died at the age of 37, raphael occupied a unique social position, on terms of friendship with cardinals and princes, a position never before attained by an ARTist. the (baseless) rumor current at his death that the pope had intended to make him a cardinal is the most eloquent proof of the change wrought principally by leonardo, michelangelo, and raphael.

renoir, pierre-auguste (1841-1919)

was one of the greatest of the painters affected by impressionism. he worked from the age of 13 in a china factory and his early training as a painter on porcelain predisposed him towards the light pallette of impressionism. in 1861 he spent some time in the teaching studio of the academician gleyre, where he met monet, bazille and sisley. he also went to the louvre often, and was particularly interested in watteau, boucher and fragonard. all his life he was conscious of the need to study ART in museums and dissatisfied with the purely visual aspects of impressionism. the main influence on his early career was courbet, until about 1868, and during this time he used heavy impasto and rather dark color. in 1868 he and monet worked together on the seine, and as a result of painting continually out of doors - and of monet's influence - his color became lighter and higher in key, and his handling freer, the whole canvas being managed in patches of colored light and shadow without any definite drawing. he exhibited in the first three impressionist exhibitions and then in the seventh; after 1877 he was successful in getting some of his portraits into the salon, and was unwilling to risk the market that this offered for the sake of the often disadvantageous advertisement provided by the group shows.

in 1879 and again in 1882 he visited north africa, was in guernsey in 1880, and made his first of several trips to italy in the winter of 1881-1882; he later traveled widely, visiting london, holland, spain, germany, studying in museums. he deeply admired raphael and velazquez more even than rubens, to whose ART his own was so much indebted. after his first italian journey his drawing became much firmer, his impressionism much less the spontaneous result of purely visual stimuli than the conscious use of color to recreate nature and form, and this in turn involved departure from monet's form of impressionism - direct painting before the object - by the adoption of a more elaborate technique. this technique used preparatory drawings and successive sessions on the canvas while the figure and its setting was worked up: "il faut meubler la toile", was his way of putting it.

where his early works include portraits, landscapes, flowers and groups of figures in settings of cafe, dance-hall, boats, or riverside landscapes, his late works are mostly nudes or near nudes. the warmth renoir (continued)

and tenderness of pink and pearly flesh entranced him and gave him full scope for his favorite color schemes of pinks and reds. the exploitation of a chosen color scheme is in itself an un-impressionist idea: "ill faut avoir", he said "le sentiment des fesses et des tetons."

in 1906 he settled in cagnes in the south of france, but he was already crippled with arthritis, which finally rendered him completely helpless, so that his last pictures were painted with brushes stuck between his twisted fingers. he also made a certain amount of sculpture - "dictated" rather since the clay was worked by an assistant who added or removed on his instructions, to create rather maillol-like figures of impressive simplicity and solidity. in his last years he saw a good deal of matisse, who lived near by, and he was interested in and sympathetic to the ideas behind fauvism. he painted about 6,000 pictures. america is particularly rich in renoirs, since they were bought there when the ARTist was still unappreciated in europe.

rouault, georges (1871-1958)

had already completed his apprenticeship to a stained-class window maker when he entered the ecole des beaux-ARTs in 1891 where he was a pupil of moreau from 1892 to 1895. he became the first curator of the musee moreau in 1898. his early works show moreau's influence but by 1903 he had abandoned his dark and overworked oil-paintings of biblical subjects for the series of prostitutes, clowns (from 1904-1907 and again during the 1930's) and judges (from 1908). these usually have heavy dark contours enclosing areas of violent color, and express the painter's loathing of vice, hypocrisy, cruelty and complacency. although he exhibited at the famous fauve show in 1905, he remained aloof from all groups and systems of aesthetics, and developed one of the purest forms of expressionism.

before 1908 he worked mostly in watercolor and gouache, only returning to oil painting after about 1918; he also executed a large amount of graphic work. his series of etchings, originally made for two books guerre and miserere from 1916 to 1927, were eventually published in 1948 under the title miserere, and he also made lithographs and colored etchings. his themes remained within the limits of his three series; religious subjects - chiefly of the passion (rouault was a devout catholic) - landscapes of bleak and hostile country, and an occasional bouquet of flowers. he worked for the diaghileff ballet in 1929, executed tapestry cartoons in 1933, and in 1945 designed stained-glass windows for the church of plateau d'assy. there are works in most museums of modern ART.

rousseau, henri (1844-1910)

called "le douanier". was an amateur or sunday painter with a direct simple and hauntingly naive vision, who often painted unusually large and complicated pictures of elaborately fanciful and picturesquely exotic subjects in a matter-of-factly pedestrian technique and strong color.

he served as a regimental bandsman - according to his own account, in mexico in 1861-1867, which provided him with his fantastic settings - and as a sergeant in the franco-prussian war of 1870-1871. he entered the paris municipal customs service (hence "le douanier"), and began painting about 1880, exhibiting at the independents from 1886. a dinner in his honor was given in picasso's studio in 1908, and this gesture has played its part in the transmogrification of "le douanier" into a symbol of sophisticated interest in the pseudo-primitive and in the opening of the floodgates of both the psychological and the sentimental school of writer on ART. he seems to have combined a certain peasant shrewdness and bland self-esteem with gullible simple-mindedness; he kept a school where he taught elocution, music and painting; wrote two plays; got himself involved, though guiltlessly, in a trial for fraud; and finally died, it is said, as a result of a disappointment in love in pursuit of a third wife.

rubens, sir peter paul (1657-1640)

was born at siegen in westphalia. he came of an antwerp family which returned there by 1589 and in 1591 he became for six months the pupil of a landscape and decorative painter called verhaecht, who had been to italy. he was then, for four or five years, in the studio of adam van noort before becoming a pupil of otto van veen, a traveled and scholarly painter, until 1599. he entered the guild in 1598 and in 1600 went to italy and became court painter to vincenzo gonzaga, duke of mantua. in 1603 he accompanied an embassy taking horses and pictures from mantua to philip III in madrid, where he admired the titians and raphaels in the spanish royal collection. from 1604 to 1608 he was in mantua, rome, genoa and milan and was working in rome when he received news of his mother's illness. he reached antwerp too late, and was about to return to mantua when he was appointed court painter to the spanish governors of the netherlands, an appointment he held to his death. he settled in antwerp, where he built himself an italianate palace, married isabella brandt in 1609, and started on what was perhaps the most energetic and fruitful career in the history of ART and one which made him the most important ARTist in northern europe and the greatest northern exponent of the baroque.

rubens (continued)

in italy he had studied the ARTists of the high renaissance, particularly titian and michelangelo, and after his return to flanders his first works show how deeply he was influenced by caravaggio. after the success of the raising of the cross (1610), he evolved in the descent from the cross (1611-1614 both antwerp cathedral.) this was a less passionately dramatic style so that numerous assistants could work under him to fulfill the multitude of commissions that poured in. his letters prove how carefully he controlled the execution of his designs, and in most cases he did the final work on a picture himself to restore to it something of the unity of the first sketch; the amount of personal execution was a question of price. his chief assistants were of the first ability; the young van dyck entered his studio about 1617, and jordaens and snyders were for many years employed by him. without the methods he devised for the division of labor his vast output over so many years could never have been achieved, much less maintained at so high a standard. his practice was to make smallish sketches, very free in handling, usually on panels with a light streaky buff or grey ground, the loose drawing touched in with indication of the local colors. some of his tapestry designs are larger, more closely worked out, and more fully colored.

his major commissions include the decoration begun in 1620 of the jesuit church in antwerp, calling for 39 ceiling paintings and three altarpieces, which last alone survive, the rest having been burnt in 1718; the medici cycle painted for the luxembourg palace in paris (1622-1625, now in the louvre); the ceiling of the banqueting house in whithall (his only surviving ceiling) completed for charles I in 1635; the huge scheme of decoration for the torre de la parada commissioned by philip IV of spain, on which he was working at his death. besides these there were countless altarpieces, portraits, hunting scenes, landscapes, religious pictures, scenes from classical mythology and history, allegories, tapestry designs, book illustrations and designs for triumphal processions. he was employed on diplomatic missions by the governors of the netherlands - to holland in 1627 (when he visited utrecht and met honthorst), to spain in 1628 (when he made copies of the titians he had admired in 1603, and became friendly with velazauez), to england in 1629 (when he was knighted by charles I), and these missions served as a distraction after the death of isabella brandt in 1626. in 1630 he married rubens (continued)

again. the sixteen year old helene fourment became the theme and inspiration of his late mythologies and the subject of many portraits. since gout was now limiting his activity in the workshop, he could devote more time to the personal side of his ART in which his domestic life, hitherto kept in the background, played a dominant part. after his death, his widow wanted to destroy some of his more intimate portraits of her, such as the one in a fur cloak, now in vienna.

almost all the older galleries, and most of the more recent ones, contain works attributed to rubens, which may be entirely autograph or more or less autograph workshop productions.

seurat, george (1859-1891)

studied at the ecole des beaux-ARTs, where he read chevreul's book on the theory of color (first published in 1839, and republished in 1889). later he studied the paintings of delacroix at st. sulpice in paris, and delacroix's theory, as it is ascertainable from his diaries. he was himself elaborating the theories of delacroix. he was also much influenced by the aesthetic theories based on the observations of a scientist, charles henry, and the conclusions of david sutter's writings on the phenomena of vision, published in 1880. these led him to evolve first the theory of divisionism and then a method of painting by the use of color contrasts in which the areas of shadow are broken down into the complementaries of adjacent areas of light, the light itself being broken down into local color, the color of the light and of reflections, so that for instance bright yellow-green grass will contain reflections from the sky and from other nearby objects, and shadows in it will tend towards reddish-purple; or the shadows in a reddish-orange dress will be preponderantly greenish-blue. he also evolved a formal type of composition, based on the golden section, on the proportion and relation of objects within the picture space to one another and to the size and shape of the picture, on the balance of verticals and horizontals, and on figures placed across the picture plane or at right angles to it. where the impressionists stressed the flickering quality of light and figures caught in movement, seurat aimed at a static quality. his bathers at asmeres (la baignade; london, ng), exhibited in 1884 at the salon des ARTistes independants in paris was not so thorough-going an exposition of his seurat (continued)

theories as the sunday on the island of la grande jatte (chicago) exhibited in 1886 at the last impressionist exhibition, and the term neo-impressionism was established for seurat and the group round him by 1886. he was for long opposed to any popularization of his theories, since he believed that by robbing them of novelty it would also rob them of their effect, but in 1890 he consented to the publication of a resume of his theory. his early death, however, meant that his ideas were developed only by followers and imitators.

severini, gino (b. 1883)

was living in paris when the original futurist manifesto appeared in 1910. he signed it, but thought it showed his fellow countrymen in a provincial light and induced them to pay more attention to cubism. he himself was much influenced by seurat and neo-impressionist theories. in recent years he has decorated several churches in switzerland with frescoes and mosaics in a more neo-classical manner.

toulouse-lautrec, henri-marie-raymond de (1864-1901)

had the misfortune to break both his legs in childhood, as a result of which he was stunted in his growth. in 1882 he began to study ART seriously in paris, and by 1885 had a studio in montmartre. he exhibited at the salon des independants from 1889 and with les XX in brussels, and in 1891 his first posters brought him immediate recognition. he made his first color prints in 1892, and held a one-man show in paris in the following year. in 1894 he went to brussels, and in 1895 made his first of several visits to london, where he knew oscar wile and beardsley. he held a second exhibition in 1896, and visited holland, portugal and spain, but in 1898 his health began to suffer from drink. in 1899 he spent three months in a clinic recovering from an attack of dt's, and during his convalescence he worked on a series of drawings of the circus. after his recovery, he resumed his old life, but in 1901 he broke down completely and was taken to his mother's country house, where he died.

his first teacher had encouraged him to paint animals, particularly horses; after he began studying in paris he met emile bernard and van gogh, and he was deeply influenced by the technique and subject matter of degas, and by japanese prints, the influence of which was all-pervasive in impressionist circles. his subject matter was centered narrowly around the life he led;

toulouse-lautrec (continued)

some portraits, many painted out of doors, scenes from dance-halls, and cafes in montmartre, such as the moulin rouge, or from aristide bruant's cabaret "le mirliton", figures of actresses, female clowns, circus artists seen backstage, and a great number of nudes, either a la degas - washing, dressing - or seen sitting around in brothels, waiting for customers. he loathed posed models; these naked women just walking or sitting about provided him with models in movement and under no restraint either in pose or behavior, and to study them he lived for some time in maisons closes.

his technical range was very wide. he was a superb draftsman with a gift for conveying rapid movement and the whole atmosphere of a scene with a few strokes. most of his paintings are in spirit-thinned oil paint on unprimed cardboard, using the neutral buff tone of the board as an element in the design. he executed a large number of posters in lithography, with masterly handling of highly simplified line, large areas of flat color, and a unique concentration on the eye-catching quality of the design. he also made small lithographs, either for menu heads, programmes, book-covers, or the like, or as single prints or series from his usual subject-matter. occasionally he used watercolor and paste and towards the end of his life his use of oil paint tended to become heavier, more impasted, with more solidly painted backgrounds. he was not interested in light as were the impressionists, but only in form and movement, and most of his works are devoid of chiaroscuro; for him, light illuminated, never enveloped. he subscribed to no theories, was a member of no ARTistic or aesthetic movement, and the works in which he records what he saw and understood contain no hint of comment - no pity, no sentiment, no blame, no innuendo.

tanguy, yves (1900-1955)

was a french surrealist, who began life as a merchant seaman and took up painting in 1924 after seeing a chirico. from 1939 he lived in the united states.

utrillo, maurice (1883-1955)

was the son of suzanne valadon, herself a talented painter who was encouraged by renoir, degas and toulouse-lautrec, for whom she posed as a model.

utrillo (continued)
he early developed into a confirmed drunkard and drug addict, spent many years in clinics and sanitoria, and his drinking bouts often ended in the police station. his mother made him learn to paint as a distraction and a form of therapy. his ART shows nothing of this wild and melodramatic background. his paintings are almost all town views, often painted from picture-postcards; they show a sensitive understanding of tone, are delicate and almost monochromatic in color, with precise drawing and a strange feeling for the atmosphere of a particular street or building. his best works were produced between 1908 and 1916; success made him repeat himself. most museums of modern ART have an example.

van gogh, vincent (1853-1890)
was the son of a dutch pastor. he was first employed in the hague, london, and paris by the picture dealers for whom his brother theo worked. he then taught in two english schools, worked in a bookshop in holland, began studying for the church, and became a missionary in the coal-mining district of the borinage in belgium, where he shared the poverty and hardships of the miners. he did not begin to become an ARTist until he was living in great poverty after his dismissal from the mission in 1880, and from then until 1886 he lived variously at brussels, etten, the hague, drenthe, nuenen and antwerp, teaching himself to draw and paint. he had occasional lessons in brussels, from antoine mauve in the hague, and at the academy in antwerp, which appear to have contributed little to his development. in 1886 he joined theo in paris and came immediately into contact with the works of the impressionists, which theo endeavoured to sell in the gallery devoted to modern ART that he directed. he met toulouse-lautrec, pissarro, degas, seurat and gauguin and in 1888 went to arles where he was later joined by gauguin. in december 1888 he became insane, and from then until his death he suffered intermittent attacks of mental trouble. during the intervals between the attacks he continued to paint, both in the asylums at arles and st. remy and after his removal to auvers, where, in july 1890 he shot himself. his brother theo, to whom most of his long and revealing letters were addressed, and who was his constant support, moral and financial , died six months later.

van gogh (continued)

van gogh's dutch period is characterized by his use of dark color, heavy forms, and subject-matter chiefly drawn from peasants and their work. he ignored theo's advice to lighten his palette as the impressionists were doing, but during his short stay in antwerp he became more interested in japanese prints and the work of the rubens. after his arrival in paris a complete change took place in his palette and subject matter; he adopted impressionist technique leaning briefly towards the pointillism of seurat, and turned to flowers, views of paris, and portraits and self-portraits which enabled him to experiment with these new ideas. after he went to arles, he painted many landscapes and portraits in heightened color and with a vivid passionate expression of light and feeling, and after the arrival of gauguin his work shows the influence of synthetism in the greater simplification of his forms and his use of less modulated color.

his paintings done at st. remy and auvers are vivid in color and with writhing, flame-like forms in the drawing, completely expressive of his tormented sensibility. his greatest influence was on munch and the german expressionists.

he left a vast volume of work, the largest amount of which is in the collection of theo's son, ir v. w. van gogh at laren in holland, and in the kroller muller museum at otterlo in holland.

velasquez, diego (1599-1660)

was a baroque ARTist in spain who alone maintained a delicate balance between the extreme of feeling and intellectuality. in his work, velasquez revealed exceptional insight into personality and relationship of individuals and their reactions to situations.

vermeer, jan (1632-1675)

was a dutch painter best known for his genre compositions. his work and that of other protestant dutch painters of the period was in contrast to the worldly, self-assured ART of catholic flanders; a new set of values prevailed with the most noticeable variation being in the choice of theme, e.g. old and new testament subjects instead of saints. a characteristic of his style is his interest in the effect of light and his subject.

vlaminck, maurice (1876-1958)

was one of the fauve group, and shared a studio with derain. he wrote, played the violin, was a racing cyclist, loved speed, crowds and popular amusements. he admired van gogh in 1901, negro sculpture about 1904, cezanne in 1907, and denounced cubism as over-intellectual and sterile. he painted chiefly landscapes of stormy weather, where the feeling is expressionist and the dark shadows, strong light effects, and wild skies are rendered in a technique whose slashing brush-stroke and heavy impasto are largely derived from courbet - an ARTist whom he resembled in many ways. most museums of modern ART have examples.

watercolor painting

blake, william (1757-1827)

earned a meager living by working for publishers as an engraver, ususally of other men's designs, but between his bread-and-butter work he produced his own poems in books which he made and published himself, engraving the text and surrounding it with an illustration which he colored by hand. in this manner he issued the "songs of innocence" (1789) and "songs of experience" (1794), and his various "prohpetic books" (1783-1804). his greatest works are his twenty-one large watercolors illustrating the book of job, produced from 1820 and engraved in 1826; 102 illustrations to dante, of which seven were published in 1827; and his color-printed drawings, which include the *nebuchadnezzar*, the *hecate*, and the *elijah in the chariot of fire*. these were made by printing off a design prepared in distemper on millboard, and then finishing each individually.

most of his designs were carried out in normal watercolor technique, but his so-called "frescoes" are in a highly unorthodox form of tempera which has deteriorated badly. his early work is within the current neoclassical style, but as his verse and philosophy acquired a more visionary quality, so he turned to forms and ideas evolved from medieval and mannerist examples, abandoned logical arrangement in space, and developed a purely subjective use of color, light and form to give substance to his visions. whatever his sources, he always transmuted everything by the power of his imagination; this is his salient quality and marks the sharpest reaction against the age of reason and the dawn of romanticism.

in 1800 he moved to felpham, near bognor, where he lived uneasily for three years in the circle of the poet hayley, which included flaxman and romney. his difficulties with the engraver cromek, over his illustrations to blair's 'grave' (1808) and his picture and engravings of the canterbury pilgrims (1810), are reflected in one of his typically pungent epigrams: 'a petty sneaking knave i knew -- ah! mr. cromek, how d'ye do?' his detestation of reynolds' theory was expressed in his annotation ot the 'discourses': 'this man was hited to depress ART'. he was also of the opinion that all the parts of reynolds' discourses' with which he found himself agreeing were due to barry or fuseli. in his last years he was helped by linnell, and his circle of friends included varley, richmond, calvert, palmer, and fuseli, who admitted that he found blake 'damned good to steal from'. the tate gallery, london has a fine collection of his work, and there are also examples in boston (museum), cambridge (fitzwilliam), cambridge mass. (fogg). london (bm, v & a), manchester (city ART gallery and whitworth), melbourne, new york (met. mus., morgan library, brooklyn), san marino, california (huntington), and elsewhere.

burchfield, charles (1893-   )

american painter of the ashcan school

daumier, honore (1808-79)

worked as a cartoonist on 'la caricature', founded in 1830, and was imprisoned in 1832 for representing king louis-philippe as gargantua. after the suppression of 'la caricature' in 1835 , he joined 'charivari', and made, for this and other similar journals,some 4,000-odd lithographs mostly of the aptest and bitterest political and social satire. his watercolours and wash drawings of scenes in the courts of justice, and everyday life, are untouched by any romantic feeling for picturesque poverty and his large oil paintings, many on the theme of don quixote, are loosely handled, with calligraphic brushwork and intense light and shadow. he became blind in his old age, and was rescued from desperate poverty by corot. there are works in baltimore (museum, walters), boston (museum), cambridge mass. (fogg), cardiff, glasgow, london, (ng,bm, v & a, tate, courtauld inst.), montreal, new york (met. mus., brooklyn), ottawa, paris (louvre, petit pa.), philadelphia (museum), washington (ng, corcoran, phillips), and elsewhere.

dehn, adolph

american watercolor painter of landscapes.

durer, albrecht (1471-1528)

was the son of a goldsmith who settled in nuremberg in 1455, and in 1467 married his master's daughter. the young albrecht was first apprenticed to his father, and was then bound for three years to the painter michael wolgemut, whose large workshop also produced woodcut durer - cont.

book-illustrations for the printer anton koberger, durer's godfather. he travelled for eighteen months, from easter 1490, and then visited colmar (intending to work under martin schongauer), basle, and strasbourg and in May 1494 he went to venice (his great friend, the humanist wilibald pirckheimer, was then a student at padua) and returned home by spring 1495. late in 1505 he again went to venice, travelling via augsburg, and stayed until february 1507. during this visit he met giovannia bellini, whom he greatly admired, and painted several works including the madonna of the rose garlands (prague; now very damaged) for the german merchants in venice, and the christ among the doctors, which shows some ,knowledge of leonardo. on his return he intensified the learned side of his ART and personality; he studied mathematics, geometry, latin, and humanist literature, and sought the company of scholars rather than that of his fellow-artisans. this departure in mode of life and thought was directly traceable to the influence of leonardo and mantegna and the example of bellini, and thought it was common enough in italy, it was unprecedented in germany. in 1512, he became court painter to the emperor maximillian, and in july, 1520, he journed to the netherlands to obtain from his successor, charles V, the ratification of his post and pension. he saw the coronation of the new emperor at zix-la-chapelle and was confirmed in his office, visited antwerp, brussels, malines, cologne, middelburg, bruges, and ghent, and was honored and feted all along the route. he returned home in july 1521, and despite ill-health resulting from fever, probably contracted in the swamps of zeeland, where he had ventured in the hope of seeing a dead whale, he worked unremittingly until his death.

durer's enormous oeuvre consists of woodcuts and engravings, paintings, preparatory and independent drawings, and he also wrote treatises on measurement (1525), fortification (1527), proportion and artistic theory (1528), besides his detailed diary of his netherlands journey. he was the main channel through which italian renaissance forms and ideas were introduced into the north, and he combined these with the individualism general in german ART and inherited the gothic tradition. his greatest influence was through his graphic work. he is one of the supreme masters of woodcut and copper engraving, and these easily transportable models carried his technique, subjects, designs, and style all over europe, and even had a considerable influence in italy. he extended the range of woodcut and engraving by perfecting the technique of both, and raised the standard of graphic ART by the training he gave to the workmen who executed his designs.

his main works in woodcut were series such as the apocalypse (1498), the great passion (1498-1510) and the little passion

durer - cont.

(1509-11), the life of the virgin (1500-1511), and single prints such as the men's bathhouse (1497), and in engraving the engraved passion (1507-12), and the many single plates such as the sea monster and the prodigal son (1497), the s. eustace (c.1501), the great fortune (1501/2), the adam and eve (1504), the knight, death and the devil (1513), s. jerome and the lelencolia (1514). the apocalypse was the first book to be entirely the work of an artist; durer here was his own artist, printer and publisher. all his works combine vivid imagery, technical refinement, expressiveness, and masterly draftsmanship with deeply thought out, and often involved, iconography which must be read, layer upon layer, before the meaning of the design becomes clear, although its visual impact is immediate. he shared in the emperor maximilian's commissions for the huge woodcut triumphs, and executed some blocks for them, but they added little to his fame. compared with his graphic work, his paintings are few in number; they are more traditional in type and usually less packed with significance. one of his greatest contributions is his watercolor and gauche landscapes, some made during his italian journeys, for they are among the most evocative expressions of mood and atmosphere in landscape painting. in october 1526, he presented to his native city, as a memorial of himself, the apostles (munich), probably designed as a part of a sacra conversazione which was not executed because of the reformation. in form, the saints owe much to bellini's saints in the frari altarpiece (venice), and their significance is bound up with the spiritual conflicts of the reformation, which affected him deeply. melancthon was a close friend, and he knew and admired both luther and erasmus. despite his large workshop he left no succession; his ART was too universal and yet too personal to breed imitators.

goya, francisco

was born near saragossa and studied there until (apparently) his amours and knifings caused him to leave: in 1766 he was in madrid working under bayea, whose sister he married. he was in rome in 1771, but was back in saragossa later in the year, working in the cathedral. by 1775 he was in madrid and from 1776 began producing tapestry cartoons for the royal manufactory; this started his successful career and he became deputy director of the academy in 1785, pinto del rey 1786, pintor de camara 1789, and primer pintor de camara (i.e. principal painter to the king) in 1799, so that his contemporaries certainly recognized his genius. in 1792, however, he was very ill and became deaf, which undoubtedly made him still more introspective, so that we find goya the official portrait painter also producing works which, he said, were "to make observations for which commissioned works goya - cont.

generally give no room, and in which fantasy and invention have no limit." this fantasy was typified in the series of etchings called los caprichos, produced 1796-8 and announced for sale in 1799 (eight more were added in 1803). these are savagely satirical attacks on manners and customs and on abuses in the church, yet in 1798 he painted the frescoes of the cupola of s. antonia de la florida in madrid (technically fascinating, because apparently executed with sponges in dabs and wipings of color). the dilemma in which goya and other liberal spaniards found themselves became acute in 1793 when charles IV declared war on the new french republic, for charles was very reactionary and most liberals were then partly in sympathy with france. in 1808 the troops of napoleon invaded spain and drove out ferdinand VII, replacing him with joseph bonaparte. many spaniards welcomed his liberalism, yet hated the foreigners - in particular the french troops, who behaved with almost 20th-century savagery. these atrocities were recorded by goya in the series of etchings called the disasters of war(1810-13 ; first published in full in 1863) and, above all, in the two paints called 2 may and 3 may 1808 (c. 1814: madrid, prado). the french were driven out with the aid of wellington (whom goya painted in 1812) and in 1814 ferdinand VII was restored. goya was pardoned for having worked for joseph bonaparte and continued to work for the spanish court until 1824 when there was a fresh wave of reaction and he went to paris and settled in voluntary exile in bordeaux. what seems so difficult to understand is how the bourbons could continue to employ him, for his portraits of charles IV and his family have been described as making them look like prosperous grocers, in fact these portraits, and those of ferdinand VII, make them appear brutish, moronic, and arrogant.

from 1819 goya began to practise the new ART of lithography and he produced some bull-fighting scenes as well as single prints and several more etchings and aquatints. there are good examples of his prints in the british museum, london, in madrid, and new york (hispanic soc.). as a painter goya began his decorative works very much under the influence of tiepolo's spanish frescoes, while his portraits are influenced by mengs and, oddly, by english 18th-century portraits (he is known to have owned engravings): an intensive study of velazquez, his predecessor as court painter, led to a breadth of style which ends as a kind of impressionism. he had great influence on 19th century french painting, especially on manet, and he has been called the last of the old masters and the first of the moderns (whatever that may mean).

gropper, william (1897 -)
pupil of bellows, illustrated chinese white satiric.

hogarth, william (1697-1764)
was apprenticed to a goldsmith and began engraving about 1720. his fame was, and is, based on his engravings of his moral subjects which have to be read, detail by telling detail, rather than contemplated as works of ART; nevertheless, all through his life he was capable of pieces of superb painting.

homer, winslow (1836-1910)
american landscape, marine and genre painter. began as a lithographer. worked for harper during civil war. traveled in england and france. best known for his paintings of maine coast. "breezing up".

kingman, dong
american oriental water colorist. oriental style with bright colors.

kollwitz, kathe (1867-1945)
was one of the most powerfully emotional german ARTists of this century. she married a doctor in 1891 and settled in berlin where she soon began to make etchings, woodcuts, and lithographs mainly of the mother and child theme and often with left-wing intentions. most of her best works are tragic and many of them are specifically pacifist - her son was killed in 1914 and her grandson in 1942. in 1927, she made a journey to russia, but was subsequently disillusioned. in 1933, whe was expelled from the academy and in the following years made eight large lithographs called 'death'. in her later years she also made some bronzes of which the most important is a war memorial at eessen in flanders.

larkin, eugene
printmaker at minneapolis school of ART. native of minnesota. print subject matter is usually music. some collage and print approach.

myers, malcom
instructor at university of minnesota. printmaker.

orozco, jose (1883-1949)
was a mexican painter who used an expressionist style for his frequently huge decorations (often in fresco or in imitations of fresco achieved with modern building materials). most of his works have strong political overtones, and, like rivera, he executed many commissions for revolutionary governments.

priede, zigmunds
instructor at university of minnesota. lithographic printmaking.

rembrandt van ryn (1606-69)

was born in leyden, the son of a miller, at the time when holland became an independent nation. after about a year at leyden university he was apprenticed for three years to an abscure painter named swanenburgh, but this was followed by a much more important six months in amsterdam (1624/5) with pieter lastman, who was the means of his introduction to the rhetoric of early baroque and perhaps also the channel by which the influences of caravaggio and elsheimer reached him. he may also have spent some time with the pynas brothers. in 1625 he returned to leyden where he set up in company with jan lievens, an association that lasted until rembrandt's move to amsterdam in 1631/2. by 1628 he was sufficiently well known to have dou as his pupil. the earliest works known to us are dated 1626, and in them - e.g. *the clemency of titus*(utrech mus.) - the influence of lastman is still dominant. many paintings of the leyden period show great interest in light and represent scholars in lofty rooms or are studies of old age; examples are the melbourne *scholars disputing, 1628, the scholar in a lofty room* (london, ng), and *rembrandts mother as the prophetess hannah* (1631: amsterdam, rijksmus). at the end of 1631 or early in 1632 he moved to amsterdam and set up as a portrait painter, attracting attention in 1632 with the *anatonomy lesson of dr tulp*, a group portrait of the amsterdam guild of surgeons (the hague, mauritshuis). this made his name and for the next ten years he prospered, producing highly finished likenesses, often in pairs, such as *maerten daey* and his *wife* (1634: private coll., paris), *jan pellicorne and his son and his wife and daughter* (c. 1635/7, both in london, wallace coll.), or the *unknown man* of 1641 in brussels and its pendant, *the woman with a fan* in the royal collection. in 1634 he married saskia van uylenborch, who brought him a considerable dowry as well as good connections, and rembrandt promptly began to live well beyond his means; the *portrait of himself with saskia* (c. 1634: dresden) shows them in a mood of blatant opulence. there are many portraits of saskia, painted, drawn, and etched (e.g. *saskia as flora,* 1635 london, ng), but in 1642 she died, leaving him with a son titus. in the same year his great group portrait, *the company of capt. frans banning cocq* (amsterdam, rijks us.), better known as the *night watch*, was painted. it was one of several such commemorative groups of the volunteer militia enlisted to defend amsterdam. each man paid according to the prominence given to his portrait, some finding themselves subordinated to the exigencies of rembrandt's ART in a way which helst or keyser, or even hals, would never have attempted.

after 1642 rembrandt's business declined and the inevitable bankrupcy followed in 1656. it used to be thought that this was because of the revolutionary character of the *night watch* but it now seems certain that captain cocq and his men were perfectly content with their picture. meanwhile he was living with hendrickje stoffels, who, with his son rembrandt van ryn - cont.

titus 'employed' him from 1660 onwards, thus affording some relief from creditors. during these years he turned to biblical subjects, creating a protestant iconography, to landscape, and to studies of the jews among whom he lived. he had been painting religious subjects from the start of his career, and had painted a series of passion scenes for prince frederick henry, 1633-9(now in munich), and such exuberantly naroque works as the *blinding of samson* of 1636 (frankfurt), but the later works are deeper in emotional content and far less superficially dramatic. the same contrasts can be seen in his etchings - compare the *annuciation to the shepherds* of 1634 with the hundred guilder print' *christ healing* of c. 1649, and the landscapes which he drew and etched in the forties, compared with the romatic ones of the period from c. 1635 when he was much influenced by seghers. his portraits of the fifties and sixties include such masterpieces of psychological penetration painted to please himself as the *jewish merchant* of c. 1650 (london, ng), *the old jew in an armchair* (1652: london, ng)and the portrait of *jan six* (1654: still in the family coll., amsterdam), as well as portraits like the *man* (1663: washington), the *man with a magnifying glass* (new york, met. mus.,) and the *woman with a plume* (washington), both painted in the sixties and clearly commissioned works.

the long series of self-portraits, datable between 1629 and 1669, records every stage of his career, every moment of disillusion, with every-deepening self-analysis. in his last years he continued to receive some important commissions, such as the *anatomy lesson of dr deyman* (1656: amsterdam, kijkmus.), or the *conspiracy of the batavisans*, commissioned in 1661 for the amsterdam town hall but removed at once for alterations (and now in stockholm nat. mus.); both these now exist only as fragments. in 1662 he completed the group of the *staal meesters*,the syndics of the guild of drapers, and this, the greates of all dutch group portraits, is now in the riksmuseum,amsterdam. later still he painted the *family group* now in brunswick, and these very late works impressed the aged hals so much that rembrandt's influence is perceptible in his last works. it is an influence which has never died out. rembrandt's output was prodigious, and there are about 650 paintings by him (of which some 60 are self-portraits)as well as about 300 etchings and 1,500-2,000 drawings. he maintained for many years a large teaching studio, and among his numerous pupils were bol, flinck, eeckhout, koninck, and aert de gelder.

rivera, diego (1886-1957)

was a mexican painter who worked in paris during the years that brought cubism to birth, and he knew most of the principal ARTS in that movement. he held aloof from it, however, and eventually returned to mexico (in 1921), where, like orozco, he was powerfully affected by politics. his first teacher, in mexico city, had been a pupil of ingres and rivera's ART was always more revolutionary in content than in style. his mexican ART is largely dependent on a vocabulary evolved from a mixture of gauguin with aztec and mayan sculpture. in his large commissions for the decoration of public buildings rivera used buon fresco, a technique that he revived, as he also revived the use of ancient encaustic methods. his mural in the rockefeller center, new york, was replaced by one by brangwyn on account of the introduction of a portrait of lenin rather than for any objection to the style.

rollins, jo

(local artist) painter.

sculpture

archipenko, alexander (1887-1964)

was a russian-american abstract sculptor. he was one of the first cubist sculptors.

barlach, ernst (1870-1938)

was a german expressionist sculptor and illustrator of tragic power. his pessimistic ART was condemned by the nazis and many of his works destroyed; survivors are now in many german museums and there is a small barlach museum near lunburg. his best works are perhaps the woodcarvings of single figures of peasants, beggars, and similar subjects, many of them inspired by a visit to russia. his woodcarving technique was closely based on german late gothic work.

berge, dorothy (1923-   )

born in ottawa, illinois. graduate of st. olaf college. did unicycle for southdale. exhibited at mpls. inst. of ART, u. of m., iowa state college, walker ART center. sculptor.

bertois, harry (1915-   )

creates metal wall decoration that hang freely in space. texture plays an important part in his work.

brancusi, constantin (1876-1957)

was a rumanian sculptor whose most successful works are often simple, highly-polished shapes. he settled in paris in 1904 and was influenced by rodin, but by 1907 was more concerned with abstract shape; he was the friend of modigliani and induced him to turn to sculpture. he exhibited at the armory show (1913) in new york, and was involved in a notorious case in 1926-8, when the u.s. customs refused to admit a work of his as sculpture, claiming that it was turned metal and thus dutiable. in 1937 he began a column some 90 feet high at rargu jiu, in rumania. there are works in london (tate), and the museums of modern ART in new york and paris, but the biggest collection is in philadelphia.

butler, reg (b. 1913)

one of the leading british sculptors, was originally an architect and has also worked as a blacksmith: most of his work is in metal, either forged or cast. he won the 1953 competition for a monument to the unknown political prisoner, and he produced another version in 1957. his first one-man show was in 1949 and the works of this period were all constructivist, but in the later 1950's he has returned to figurative work and his most recent works are superbly sensual figures of girls. he has also written a book on the processes of artistic creation.

calder, alexander (b.1898)

is an american sculptor, abstract painter, and illustrator of children's books. he was originally an engineer and his main inventions - stabiles (so named by duchamp, both dating from c. 1931)- can be regarded as a marriage between engineering and sculpture. his paintings are influenced by miro. most of his works are in america, but there is a mobile (of 1959) in leeds.

capone, anthony

head of ART department - macalester college & a sculptor

cesar, baldaccini (b. 1921)

was born cesar balacchini in marseilles, but has lived in paris since 1943. he is a sculptor who works with characteristic 20th century materials - mostly crushed motor-cars and similar industrial debris. he has three workshops, one in a foundry, so that metal is handy, and he can then weld the crushed scrap into assemblages that often take their titles from the location of the workshop, e.g. man of saint-denis (london, tate).

chadwick, lynn (b. 1914)

is a british abstract sculptor who works in welded iron and steel, copper, bronze, metal composition, plaster, and glass. like his contemporary butler he was trained as an architect. after war service he turned to sculpture and produced mobiles under the influence of calder (he made three big mobiles for the 1951 festival of chadwick, lynn - cont.

britain), but has now evolved 'balanced sculptures' which do not attempt to exploit the quality of movement. he was awarded a prize at the 1956 vice biennale and is not represented in museums in adelaide, brighton, bristol, brussels, buffalo, chicago, london (tate and v & a), manchester (whitworth), montreal, new york (museum of modern ART), ottawa, paris (musee d'ART moderne) pittsburgh, rome, rotterdam, and turin.

chamberlain, john

sculptor (welding) - non-objective automobile bodies.

epstein, sir jacob (1880-1959)

was born in new york and went to paris in 1902; from 1905 he lived in england. in 1907 he was commissioned to carve 18 statues for the british medical association building. they were erected in 1908 and caused great scandal: after that, it became customary for any new imaginative work of his to be greeted with uproar - e.g. the rima in hyde park (1925) or the carvings on the london transport building in westminster (1928-9). his portraits in bronze have an over-lifesize quality, partly due to the rugosity of the handling, reminiscent of rodin, and are generally admired: the last example was the official commission of smuts outside the houses of parliament.

gabo, naum (b. 1890)

was born in russia and is the youger brother of pevsner. he abandoned a medical career and began to study in munich under the great german ART historian wolfflin. in 1910 he met kandinsky and in 1913/14, while visiting his brother, then a cubist painter in paris, he met other artists and, on returning to russia in 1917, found himself involved in ART and politics. he and his brother opposed tatlin and in 1920 issued their 'realistic manifesto', beginning: 'we deny volume as an expression of space....' inevitably, he had to leave russia and he spent the years 1922-32 in berlin, leaving at the time of the nazi rise to power. he spent many years in england, broadcasting for the bbc during the war, and in 1946 settled in america.

giacometti, alberto (b. 1901)

is a swiss sculptor, painter, and poet. he was trained in italy 1920-22 and then spent three years in paris under bourdelle, but he was also much influenced by brancusi and became a surrealist in the 1930's. the sculpture of this period has been called 'still-life sculpture' or 'magic objects', and the most famous is the palace at 4 a.m. (1932-3: new york, museum of modern ART). later he returned to more realistic single figures, extremely emaciated in form usually built up by working directly in plaster of paris on a wire foundation. a characteristic

giacometti, alberto - cont.

example is the man pointing (1947: london, tate).

gonzalez, julio (1876-1942)

was, with laurens and lipchitz, a cubist sculptor. he was born in carcelona, into a family of metal workers. the family moved to paris in 1900 and gonzalez soon came in contact with picasso, whom he had already met in barcelona: in 1930-32 he taught picasso the technique of ironworking. for many years a painter, gonzalez worked in the renault factories during the first world war and subsequently devoted himself to sculpture in iron. he was influenced by archipenko and produced a form of cubist sculpture: in turn, his work has had great influence on british and u.s. sculptors (e.g. butler). his masterpiece is the montserrat (1936-7: amsterdam, stedelijk mus.) made for the spanish pavilion at an international exhibition, but it is more naturalistic than most of his works - e.g. the woman doing her hair (1936: new york, museum of modern ART). many of his works are in paris, museum d'ART moderne.

grandlund, paul (1925-   )

sculptor, american born in minneapolis. graduate of gustavus adolphus and university of minnesota. fullbright fellowship in italy. instructor, minneapolis school of ART. cranbrook academy, mpls. ART institute.

hapke, paul

sculptor. instructor at mankato state college. media mostly metal.

hepworth, barbara(b. 1903)

is a british abstract sculptor. she is a direct carver in wood and stone and has only recently turned to modelled forms, mostly partly cut in plaster before being cast in bronze. in 1931 she began piercing holes in her sculpture and has since exploited hollowed-out forms. she was trained in leeds, where she met henry moore, and was later also influenced by brancusi. from 1938 she has carved abstract forms in which the large masses are set off by string or wire, giving an effect like a musical instrument. her works can be seen in the open at harlow new town, essex; hatfield, or the royal festival hall, london, where she has also made large-scale decorative works for several new buildings, e.g. state house, holborn (1963).

johns, jasper (1930-   )

is one of the leading artists in the pop ART field. his works deal with its interest in popular imagery. sculp metal and bronze are two of his favorite sculptural media.

lehmbruck, wilhelm (1991-1919)
was a german sculptor trained in dusseldorf, where he was a contemporary of macke. he went to italy in 1905 and lived in paris 1910-14. he was influenced by both rodin and maillol, but his own forms are more elongated, and his materpiece, the kneeling woman, of 1911, has a gothic expressiveness. he committed suicide in 1919.

lipchitz, jacques (b. 1891)
was born in lithuania but went to paris in 1909. his sculpture shows the influence of cubism - he met rivera and picasso in 1913 - by c. 1925 he had evolved a personal style of openwork sculpture (sculptures transparents). in 1941 he went to america, where he has mostly lived, since, but in 1946 he was commissioned to make a madonna for one of the new french churches, at plateau d'assy. the barnes foundation, merrion, pa., has many works bought in 1922 by dr. barnes; others are in amsterdam (stedelijk), london (tate), new york (museum of modern ART), paris, and elsewhere. sculpture in front of walker art center.

lupori, peter
sculptor. teaches at college of st. catherine.

maillol, aristide (1861-1944)
was a french sculptor whose works are devoted almost exclusively to the female nude. he returned to the ideals of greek ART of the 5th century b.c. in a reaction against rodin's fluid forms, changing silhouettes, and dramatic content, although it was rodin who helped to make his name. by contrast, maillol stressed the static and monumental qualities of the human figure. he sometimes made use of the 'fragment' device, but never sought the dramatic contrasts of the partly unfinished figure. from 1889 he was friendly with bourdelle, although he did not begin sculpture until 1895; from 1900 he had links with the nabis and became a life-long friend of matisse. in 1908 he went to greece. one of his most famous works, the cezanne monument, commissioned in 1912 for aix, was formally rejected by the city in 1925 and was finally placed in the tuileries in paris. he is represented in the museums of modern ART in london, paris, and new york.

marini, marino (b.1901)
is one of the leading italian sculptors, although he began as a painter and continues to produce paintings and graphic work. he was trained in florence and paris and travelled extensively before settling in milan. his bronze and wood sculpture includes many versions of the horse-and-rider theme, all of which show his great interest in archaic greek ART. most major european and american museums have examples.

moore, henry (b. 1898)

is the most eminent living british sculptor. he was trained in leeds - where he met barbara hepworth - and in london, winning a travelling scholarship to paris and italy in 1925. he was one of the advocates of direct carving and has always used his material to express natural forms in terms of stone or wood. his earliest major work was the north wind (1928) for the london underground building and it has been followed by several commissions for architectural sculpture, e.g. the time-life building in london (1952-3), and works in the open air in london, paris, rotterdam, and arnhem. from 1940 he made many drawings of the underground air-raid shelters and of coal-miners, while his madonna statue for saint matthew, northampton, was completed in 1944. his international reputation dates from 1948, when he was awarded the sculpture prize at the vice biennale, and he is now well represented in museums.

nash, katherine

university of minnesota. sculpture instructor. media welded sculpture. noted for series called candy company sculptures.

pevsner, antoine (1886-1962)

was gabo's elder brother. he was born in russia and trained in kiev, where the byzantine works had a profound effect on him. in 1911 he went to paris and was influenced by cubist ideas, but in 1914 he joined his brother in norway and in 1917 they returned to revolutionary russia, hoping for a revolution in the ARTS. he was made a professor and worked with tatlin and malevich, going on to constructivism. the growing dissatisfaction of the soviet authorities with abstract ART drove him back to paris in 1923.

randall, richard (1929-   )

born in minneapolis and attended the university of minnesota, instructor at hamline university and partner in mendota sculpture foundry. some of his works are in minneapolis institute of ART and walker ART center. does mostly sculpture with metal.

rood, john

sculptor. media's - wood, stone, stained glass.

richier, germaine (1904-1959)
was a french sculptress, who also made engravings, book-illustrations, and ceramics. she worked with bourdelle 1925-9 and then under the influence of surrealism, she began to make spindly figures similar to those by biacomette (who had also been a pupil of bourdelle). she lived in switzerland 1939-45, but in 1950 was commissioned to make a crucifix for the new and controversial church at assy (haute-savoie), which has works by braque, matisse, lipchitz, and other leading artists.

segal, george (1926-)
born in new york and graduated from new york university and rutgers. his works seem to relate more to painting than to sculpture. his life size, sand white plaster figures are set in an imaginary boxed area of space, like a shop window display.

smith, david (1906-),
his great contribution is his welded metal sculpture. his large and powerful works are impressive contemporary symbols. many sculptures are environmental.

westerman, h.c.
was among the first to eschew nostalgia and make such popular objects look new. westerman uses laminated wooden structures, sometimes containing bottle tops and time square trivia.

zorach, william (1887-) embraced a monumental and classical simplicity in his sculpture.

architecture

breuer, marcel (1902-)
his buildings have a clarity of structure and organization. his teaching has left a profound impression on a new generation of america artists. he designed the gymnasium for litchfield high school, st. john's church (collegeville, minnesota) the breuer house and also work on the unesco headquarters.

gropius, walter (1883-)
a founder of the international style and leading designer of our century who advocates standardization in building as a means of increasing quality while decreasing costs. the originator of the bauhaus (a german school of design originality combining ARTS and crafts) arrived in america to serve as chairman of the department of architecture at harvard university. harvard graduate center, civic center, tallahassee, florida. (proposed).

johnson, philip (1906-   )
leading architect influenced by mies vander rohe and built for himself a very unique glass house in new canaan, connecticut.

le corbusier (1887-   )
the designs of le corbusier are clear, crisp solutions to enclosing space with classical undertones, but his designs are not linked to the past, taking full advantage of materials of his age to develop highly personal solutions to identify architectural space in complete harmony with modern technology and machine production ("a machine for living").

savoye house - (france 1929)
ronchamp chapel
monastary of la tourette - (lyons, france)
berlin apartment house (1958)
legislative buildings (chandigarh, india)
visual ARTS center - harvard
secretariat - (new york)

meis van der rohe, ludwig (1886-   )
created shelter through a minimum of detail (believed that the most direct and practical solution leads toward greatest result). his constructions make demands on industry to provide new materials. two examples are: edith farnsworth house, plano, illinois, 1950. seagram building, new york, 1958. tugendhat house.

nemeyer, oscar
is the artist who is solely responsible for the design of brasillia. he used prestressed concrete.

nervi, pier
designed the olympic buildings in rome in 1960 with prestressed concrete. municiple stadium, florence; exhibition building, unesco headquarters, palozzetto dello sport, olympic buildings.

saarinen, eero (1910-1961)
some of his most interesting buildings are: general motors technical institute, warren, michigan; yale university hockey rink; t.w.a. building, kennedy airport, new york.

sullivan, louis (1856-1924)
lead a rebellion against existing confusion of styles in design in our century through a rejuvenation of romanesque

richardson, henry (1838-1886)
architecture. they stressed restraint in applied decoration and employed building materials in their natural state for character and enrichment. form was to be determined rather than following styles.

sullivan -- wainwright building (st.louis - 1891)
carson, pine and scott department store (chicago-1899)
national farmers bank, owatonna, minnesota - 1908

richardson - marshall-field building (chicago)

wright, frank lloyd (1867-1959)
designed praire houses with their predominant horizontals, flexible ground plans, and open living space. he was the leading figure in american architecture.

yamasaki (1912-)
one of our leading architects who designed northwestern life insurance building in minneapolis.

Angelico, Fra (Da Fiesole) Florentine, 1387-1455	ahn-djay-li(lit)-coe(cove) fra (da fee-aye-zol-aye)
Arp, Hans German, 1888-	arp(harp) hahnss
Avignon School French, c.1400	a(at)-vi(veer)-nyon(diph.3) (canyon)
Barlach, Ernst German, 1870	bahr-lax err(terrance)-n'st
Beerbohm, Max English, 1872-	bare(share)-bohm max
Bellini, Giovanni Venetian, c. 1428/30-1516	bell-lee-knee dj(i)o-van-knee
Bernini, Giovanni Lorenzo Italian, 1598-1680	ber(berry)-knee-knee dj(i)ŏ-vahn-knee low-rents-oh
Boccaccino, Boccaccio Cremonese, c. 1467-1525	bock-catch-ee-nō bock-catch-yo
Bonnard, Pierre French, 1867-	bǒn(ton)-när(narrow) pea-err(terrace)
Bosch, Hieronymus (van Aeken) Netherlandish, c. 1450-1516	boss(not bosk nor bosh) he-air-o-nay-mé-üss
Botticelli, Sandro Florentine, 1444-1510	bought(never boat!)-tea-tshell-ee sand-roe
Botticini, Francesco Florentine, 1446-1497	bought(never boat!)-tea-tshee-knee fran-chess-co
Bouchard, Henry French, 1875-	boo(boon)-shar an(diph.I)-ree(reel)
Boucher, Francois French, 1703-1770	bōō-shay fran(diph.I)-sso-ah(swan)
Braque, Georges French, 1882	bräck(bracken) zhor-zh (artist gave date)

Breughel, Jan (Hell-B.) Flemish, 1568-1625	brö-x'l yan
Byzantine School IX-XIVC.	bee-zann-teen (is preferred) biz-ann-teen (less good) (from Greek bü-zan-tion)
Caravaggio, Michelangelo Roman, 1560/5-1609	car-a-vadj-jio mĕ-kel-ahn-djay-low
Carpeaux, Jean Baptiste French, 1827-1875	carr(carriage)-poe zhan(diph.I) bat-tea-st'
Cassatt, Mary American, 1845-1926	cass-satt mary(mare) (source for dates: her family)
Castagno, Andrea del Florentine,1410-1457	cast-ah-ny'o(canyon) (knee-oh) ahn-dray-ah dell
Cellini, Benvenuto Florentine, 1500-1571	tshell-lee-knee ben-vay-(vein)-noo(noon)-toe
Cézanne, Paul French, 1839-1906	say-zann(can) pŏl(polly)
Chagall, Marc French, 1887-	shă(shaggy)-gall(galley) mărc
Chardin, Jean Baptiste Siméon French, 1699-1779	Shar-din(diph.2) zhan(diph.I) bat-tea-st' sea-may-on(diph.3)
Chirico, Giorgio de Italian, 1888-	key-rea-coe (never cheer-ee-co) dj(i)or-dj(i)oh day
Corot, Camille French, 1796-1875	co-row(blow) (no stress!) ca-me-'yy
Courbet, Gustave French, 1819-1877	coor-bè(bet) güss-ta'v'
Cranach, Lucas, Elder German, 1472-1553	crah(hoorah)-nax look-as(ask)
Dali, Salvador Spanish, 1904-	dah(dart)-lee sal-vah-dor

Daumier, Honoré French, 1808-1879	dough-me-é (ate, eight) ǒ-no(nothing)-ray
David, Jacques Louis French, 1748-1825	da-vid(davidic) zhahk(long) loo-ee
Degas, Edgar French, 1834-1917	dug-ah (absolutely not day-gass!) ed-gar
Delacroix, Eugéne French, 1798-1863	du(dug)-la(sing!)-crwa (cro-a) ö-zhen(gentle without the "d" sound)
Della Robbia, Luca Florentine, 1399-1482	dell-la rob(robber)-be-an look-ah
Derain, André French, 1880	du(dug)-rin(diph.2) an(diph. I)-dray
Donatello Florentine, 1386-1466	do(sing!)-na-tell-lo
Duccio Di Buoninsegna Sienese, c. 1255-1319	do(v.)-tshee(cheese)-yo de boo-on-in-sen-ya(canyon)
Duchamp, Marcel French, 1887-	ǘ-chan(diph. I) mar-sell
Dufy, Raoul French, 1877-	dü-fi(fill) ra(rat)-ull(Pull) (short)
Dupré, Jules French, 1811-1889	dü-prā(prate) zhül'
Dürer, Albrecht Nürnberg, 1471-1528	dü-rur(burr) (r'r) al-brext
Dyck, Anton van Flemish, 1599-1641	de-i-k (preferably anglicize) ahn-tone van(varnish)
Eakins, Thomas American, 1844-1916	āche-n's to-mas
Epstein, Jacob American/English, 1880-	ep-stine yah-cob
Ernst, Max German, 1891-	er(error)-n'st max
Eyck, Jan van Flemish, 1385-1441	aye-ick (or anglicize) yan van

Fantin-Latour, Henri French, 1836-1904	fan(diph.I)-tin(diph.2)-- la(slat)-toor(boor) an(diph. I)-ree
Fragonard, Jean Honore French, 1732-1806	fra-go(gone)-nar(narrow) zhan(diph. I) o-no(not)-ray
Gabo (Pevsner) Russian, 1890-	ga-bó (gab-oh) (pev-sn'r)
Gauguin, Paul	gó-g'in(diph.2) or gó-gu(gun)-in (diph.2) pŏl(polly)
Géricault, Théodore French, 1791-1824	zhé(ail)-ree(reel)-coe tà-ŏ-dor'
Ghiberti, Lorenzo Florentine, 1378-1455	gea(gear)-ber(berry)-tee low(loan)-wren-tso
Ghirlandajo (Domenico Bigordi) Florentine, 1449-1494	gear-land-ah-yo' (do(sing!)-may-knee-co bee-gor gorge-dee)
Ghirlandajo (Ridolfo Bigordi) Florentine, 1483-1561	gear-land-ah-ho' (rea(ream)-doll-foe bee-gor gorge-dee)
Giorgione (Giogio da Castelfranco) Venetian, 1478-1510	dj(i)or-dj(i)oh-nay (dj(i)or-dj i o da cas-tell-frahn-co
Giotto Di Bondone Florentine, 1266-1337	dj(i)ot-toe dee bonn-do(sing!)-nay
Gogh, Vincent van Dutch, 1853-1890	(soft)xohx(soft) (anglicize first g) vinn-cent van
Goya, Francisco Spanish, 1746-1828	go(golly)-ya(yank) frann-this(thistle)-có
Greco (El) (Domenikos Theotoco-poulos) Spanish, 1541-1614	grek(trek)-co(coe) ell (do(sing!)-may-knee-coss (hard th) thaye-oh-toe-coe-poo-loss)
Greuze, Jean Baptiste French, 1725-1805	gròhz'(linger!)
Gris, Juan Spanish, 1887-1927	grease (soft)xoo-ahn

Gros, Antoine Jean French, 1771-1835	grô(groan) an(diph. I)-twann (to-ann)
Gruenewald, Matthias German, c. 1470/8$_3$-1531+	grii-nay-valt mat-tea-as (not ăs) (aspirin)
Hals, Frans Dutch, 1580-1666	hall-ss frahnss (not t sound)
Holbein, Hans, Elder German, 1460/70-1524	anglicize
Holbein, Hans, Ygr. German, 1497-1543	anglicize
Hooch, Pieter de Dutch, 1629-1683+	hoe-x' (not as "hooch"(American)) pea-ter(terror) du(dug)
Hugo, Jean French, 1894-	ü-go zhan (diph. I)
Ingres, J.A.D. French, 1780-1867	in(diph. 2)-gr(grain)
Kandinsky, Wassilj Russian, 1866	can(canticle)-din-skee vass(vassal)-sea-l(y)ea
Klee, Paul German (Swiss), 1879-	clay (clé) pah-ooll(one syllable!)
Leonardo Da Vinci Florentine, 1452-1519	lay-oh-nar-dough da vinn-tshee(cheer)
Liebermann, Max German, 1847-1935	lea-b'r-mahnn (open, short, sharp) max
Lipchitz, Jacques French, 1891	lip-sheets(but shorter!) zhzhk
Lippi, Filippino Florentine, C. 1457-1504	lip-pea fill-li(lit)-pea-no
Lippi, Fra Filippo Florentine, c. 1406-1469	lip-pea fill-lip-poe
Lucas, Eugenio, Elder Spanish, 1824-1870	look-as(ask) aye-oo-(soft)xaye-knee-oh
Lucas van Leyden (Jacobsz) Dutch, 1494?-1533	luc-ass van la-y'd'n (yah-copse)
Luks, George American, 1867-1933	lukes (Saint Lukes)

Magnasco, Alessandro Genoese, 1677-1749	man-yass-coe a-less-sand-roe
Manet, Edouard French, 1832-1883	ma-ne(net without end t) e(aye)-do(v.)-are
Mantegna, Andrea Paduan, 1431-1506	man-ten-y'a ahn-dray-ah
Marquet, Albert French, 1875	mar-ke(keg) al-ber(berry)
Masaccio (Tommaso di Giovanni Guidi) Florentine, 1401-1428?	ma'-zatsh(watch)-she-oh (tom-ma'-zo dee dj(i)oh-van-knee goo-ee-dee)
Matisse, Henri French, 1869-	mah(mar)-tea-ss' an(diph. I)-ree
Michelangelo (Buonarroti) Florentine, 1475-1564	me-kel(kelley)-an-djay-low (never my-kel(michael)) (boo-oh-nar(narrow)-roe-tee)
Mignard, Pierre French, 1612-1695	me-knee-ă̌r'(array) (no d sound!) pea-err' (berry)
Millet, Jean Francois French, 1814-1875	mille (millennium) (exception to rule! not me-ye) zhan (diph. I) fran (diph. I)-swah(swat)
Miró, Joán Spanish, 1893-	mi(mirror)-ró(rock) (soft)xo-ahn
Modigliani, Amedeo Italian, 1884-1920	mode-eel-lea-ah-knee ah-may-day-oh
Mondrian, Piet Dutch, 1872-	mohn(mown)-dree-ahn peat
Montagna, Bartolomeo Brescian, c.1450-1523	mon-ta(tar)-nya(canyon) bar-toe-low-may-o
Moreau, Gustave French, 1826-1898	mo(motto)-roe güs-tav'
Munch, Edvard Norwegian, 1863-	mo͝onk (not mōōn but short oo) ed-vard
Perugino (Pietro Vannucci) Umbrian, 1445-1523	pay-roo(roost)-gee-no (pea-ate-roe van-noot-shee)

Picasso, Pablo (Ruiz) Spanish, 1881-	pea-cahs (broader than castle) so --(castle) (Brit.) pah(pa)'-blow
Pigalle, Jean Baptiste French, 1714-1785	pea-gal' (linger!) zhan(diph. I) bat-tea-st' (linger!)
Pissarro, Camille French, 1830-1903	pea-ssarrow (arrow) . ca-me-y' (linger!)
Poussin (Gaspard Dughet) French, 1615-1675	puss-sin (diph.2) (gas-pǎr) dü-ge (get)
Poussin, Nicolas French, 1594-1665	pooh-s-sin(diph.2) knee-col(college)-ah
Raphael (Rafaello Sanzio) Umbrian/Roman, 1483-1520	(the pronunciation ray-fay-ell is as far as possible from the original) rah-fa(sing!)-ell
Redon, Odilon French, 1840-1916	rud(ruddy)-on (diph.3) odd-ee-lon (diph.3)
Rembrandt van Rijn Dutch, 1606-1669	rem-brant van rhine
Renoir, Auguste French, 1841-1919	run-o'ar(are) o-güst'
Rivera, Diego Mexican, 1886	ree-vā(vale)-ra dee-ā-go
Rodin, Auguste French, 1840-1917	rod(rod) (no stress)-in(diph.2) (not roe-dȧnn nor roe-din) oh-güst (linger!)
Rossellino, Antonio Florentine, 1427-1479+	ross-sell-lee-no ahn-toe-knee-oh
Rosso Fiorentino (Giovanni Battista di Jacopo Florentine, 1494-1540/I	ros-sow fee-ore-en-tee-nŏ (dj(i)oh-van-knee bat(bat)-tiss-ta dee ya-coe-poe)
Rouault, Georges French, 1871-	roo(root)-oh zhorzh'
Rousseau, Henri Julien (le douanier) French, 1844-1910	rŏŏss-ssŏ an(diph. I)-ree zhü-ly'in (diph. 2) (lu' do(v)-ah-knee-aye)
Rubens, Petrus Paulus Flemish, 1577-1640	rü-b'n's (anglicize) pay-trüss pah-oo-lüss

Seurat, Georges French, 1859-1891	ssö-rǎ(short) zhorzh
Signorelli, Luca Umbr/Florentine (Cortona), 1450-1523	sea-ny'(canyon)-oh-rell-lea look-ah
Simon, Lucien French, 1861-	sea-mon (diph.3) lü-sea-in (diph.2)
Simonet, Jean Baptiste French, 1742-1813	sea-mon-è(keg) (no t!) zhan(diph. I) ba-tee-st'
Steen, Jan Dutch, c. 1626-1679	stain (absolutely not steen, like in bean, but ain like rain, vein, cane, etc.) yan
Tanguy, Yves French, 1900-	tan(diph. I)-gea(gear) eave(eve
Tintoretto (Jacopo Robusti) Venetian	tin-toe-ret-toe (Ya-coe-po roe-booss(loose)-tee)
Titan (Tiziano Vecelli) Venetian, 1477-1576	ti(tick)-sh'n (really tea-tsee-ah-no vei(vein)-tshell-lee
Toulouse-Lautrec, Henri de French, 1864-1901	too(tool)-loo(loose)-z'(zephyr)-- low(loan)-trek an(diph. I)-rea du(dug)
Utrillo, Maurice French, 1883-	ü-tree-yoh(trio) mo-riss'
Velazquez, Diego Rodriguez Spanish, 1599-1660	vale-ath-keth (not "coo-eth") dee-ā-go rod-ree-geth
Vermeer van Delft, Jan (Johannes) Dutch,1632-1675	ver(very)-mā(male)-r van dell-f't yan
Villers, Gaston French, 1870	vil-ler' (berry) (linger!) gass-ton (diph.3) du(dug)
Vlaminck, Maurice de French, 1876-	vla-min(diph. 2)-k mo-riss du(dug)
Vuillard, Edouard French, 1868-	vü-ee-yar (yarrow) aye-do(v.)-are
Watteau, Antoine French, 1684-1721	vat-toe (by no means oo-at-toe) an(diph. I)-twan
Weyden, Rogier van der (Roger de la Pastoure) Flemish, 1399/1400-1464	vie-d'n roe-dj(i)er(terrace) van der(derrick) (pa-tour')

ART exhibits

students love to exhibit their work and this should play a large part in every ART student's life.

these exhibits can range from small one-student shows in the school building to large shopping center shows of two hundred or more projects. however, it is importnat for us, as ART educators, not to lose sight of why we are teaching ART. therefore, if all student's work cannot be shown, perhaps the students themselves should judge the projects to represent their school.

an end-of-the-year ART show should be held as this is a very exciting and stimulating function of the school year. this will interest the students, parents, school personnel and the general public, and thus will serve as a culture for the community.

materials for ART exhibit

- peg boards
- peg board clips
- clothes pins (clip)
- mat boards
- clothesline (colored plastic)
- large tables
- reytrim cardboard

- masking tape
- rubber cement
- colored paper
- easels
- wire
- duco cement
- pegboard hangers

places to exhibit

- barber and beauty shop in southtown
- bloomington school exhibits (all school and certain smaller events)
- control data
- lutheran brotherhood
- minneapolis symphony - northrop auditorium
- penny art show - sponsored by local women's clubs
- southdale
- southtown bowling alley
- thunderbird motel

ART AWARD

BLOOMINGTON PUBLIC SCHOOLS

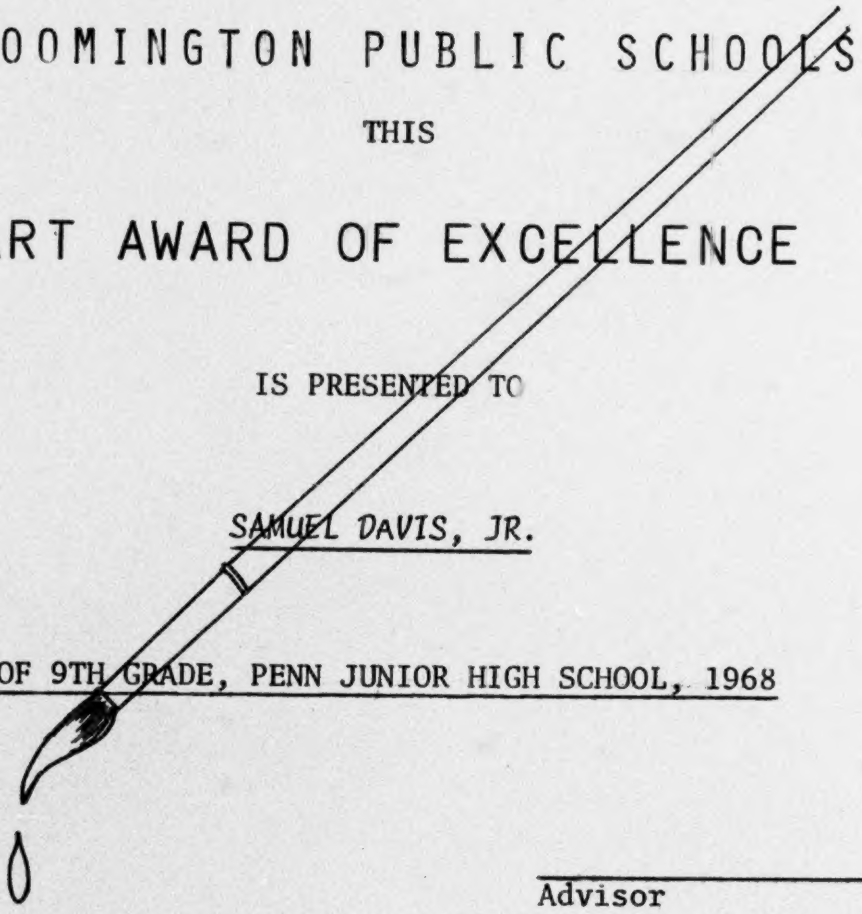
THIS

ART AWARD OF EXCELLENCE

IS PRESENTED TO

SAMUEL DAVIS, JR.

OF 9TH GRADE, PENN JUNIOR HIGH SCHOOL, 1968



____
Advisor

____
Principal

The art award may be given to art students who have demonstrated their art scholarship, creative ability, industry, cooperation and high level of technical achievement upon completion of the junior high school year and/or the senior high school year.

equipment suppliers

st paul book and stationery -	6th & cedar, st paul, minn.	222-8421
farnhams	301 south 5th st., mpls., minn	332 4242
artsign materials	404 marquette ave., mpls., minn	333-3557
vaughn's inc.	5050 west 78th st., mpls.,minn.	927-7365
warners hardware	13 south 6th st., mpls.,minn.	333-4111
gager's handicraft	1024 nicollet avenue, mpls., minn	335-6757
l & l kiln manufacturing co.	chester 11, pennsylvania	
paper supply company	240 portland avenue, mpls., minn.	332-1571
dick blick ART company	galesburg, illinois	
shur-nuff display	322 1st avenue no., mpls., minn.	339-0041
killbride-bradley ART materials	68 south 10th st., mpls., minn.	336-0252
oriental artists supplies	horse shoe, north carolina	
youngblood lumber	1335 central ave.,n.e., mpls., minn.	789-3521
armstrong cork supply	4539 hiawatha ave., mpls., minn	729-9388
harris tent & canvas co.	511 30th ave., s.e. mpls., minn.	331-1321
minnesota paper company	3003 pacific, mpls., minn.	529-7711
broadhead & garrett	4560 east 71st st. cleveland, ohio 44105	
sax ARTS & crafts	milwaukee, wisconsin	
linden brush company	812 north allen avenue mc henry, illinois 60050	

materials can be found in the community which will greatly help in supplementing an ART department's supplies. some of these materials are as follows.

acetate
aluminum foil
beads
bottles
boxes
burlap
buttons
candles
canvas
cartons
cellophane
chains
cloth
clothespins
containers
copper
cord
dowels
felt
flannel
glass
jewelry
leather scraps
linoleum
masonite
milk containers
mirrors
muslin
needles & pins
paper bags
paper boxes
paper plates
paper tubes
pine cones
pipe cleaners
plastics
popsicle sticks
ribbons
rope
sandpaper
sealing wax
seed pods
soap
sponges

community materials continued.......

spools

stones

tiles

tin cans

tin foil

tongue depressors

twine

wall board

wallpaper

wax

wire

wire screen

yarn

ART supplies

specific information regarding size and quantities is available on the ART department requisition form.

ordering of stock items should be done by use of the regular central stores requisition.

ordering of non-stock items should be done by use of the regular commodities requisition.

barthin oil
basswood boxes
balsa wood sticks
blades x-acto
blades mat knife l-shaped

book pen lettering
book speedball textbook
bottle plastic squeeze
brush sets
brush acrylic polymagic

brush bamboo wood cvr grum
brush bulletin cutters
brush delta acrylustre
brush easel artista
brush fitch stroke

brush glaze ceram
brush lettering single stroke
brush mop grum
brush oil
brush shellac

brush one stroke sign painters
brush showcard
brush sign painters
brush watercolor
brush varnish grum

burlap
canvas board ARTist
carpet warp
carving set speedball
charcoal

clay
clay cutter wire
clips peg board
compass eagle
container rubber cement

crayons
cups metal water
cups plastic water
cutter tips linoleum
drape sticks

drawing lettering kit
easel ARTists grum
easel master
enamelings powdered glass
files surformtype

finish rubbers
glaze
glitter
guides lettering
hammer

handles linoleum cutter
ink block printing oil
ink block printing water soluble
ink drawing waterproof
ink printoleum

ink t-grade
kiln wash
knife fettling
knife l-shaped mat
knife palette

knife sloyd
knife x-acto
linoleum burlap backed
linoleum blocks
marker watercolor

masonite
modeling wheel amaco
needles tapestry
oilstone
paint - brilliant

paint - liquitex
paint - oil color
paint - tempera liquid
paint - tempera powdered
paint - watercolor

palettes flexible steel
paper - ART
paper - blkprtg
paper - blotters
paper - cellophane

paper - construction aaa
paper - colored gmd
paper - cover
paper - charcoal
paper - drawing board

paper - matching
paper - drawing
paper - frieze rolls
paper -fluorescent
paper - metallic

paper - mounting board
paper - newsprint
paper - oatmeal
paper - palette pads
paper - plain white blank

paper - rr bond
paper - rice
paper - reytrim roll
paper - scratch
paper - stu watercolor

paper - tagboard
paper - tissue
paper - tracing
paper - velour
paper - wrapping

pariscraft
paste matchless
pen crow quill
pen esterbrook
pen hunt

penholder grum
pen pentel
pen tacrograph set
pen points
pencil set colored venus

pencils
plastic wood
pliers
pottery lifters
pyrometric cones jr

raffia
rasp
reed
rods steel
rug filler

scraper flex
scraper rigid
screen
screwdriver
sculp metal

sculp metal solvent
shelf supports
solder
soldering iron
sponge

spray adhesive
spray fixative
spray del-fix
spray drylon
spar varnish

steel brush speedball
steel wool
stilts
stone sharpening grum
tape double coated masking

tile
tile grout
tools amaco steel
tools potters
tool rib

tools wire and wood
tool wheel turn
tortillion stomps
varnish
water lox wood sealer

wheat paste
wire chicken
wood basket base
wood carving set
yarn

ART films

instructional materials center

recommended for junior and/or senior high school

imc number	title	length
f1130	ART in our world	11 minutes
f4013	ART of the middle ages	30
f4012	ART: what is it? why is it?	30
f4014	chartres cathedral	30
f1167	coils, slabs, and space	9
f1168	combining clay forms	9
f1133	design	11
f3099	discovering composition in ART	16
f3026	discovering color	16
f3025	discovering ideas for ART	15
f3027	discovering perspective	14
f1132	discovering sculpture	10
f3036	the face of lincoln	20
f1190	geyser melodies	11
f3009	how to make papier mache animals	12
f3157	lasc aux: cradle of man's ART	18
f3094	leonardo da vinci and his ART	13
f1172	the loon's necklace	11
f1165	the nature of clay	11

f1171	painting an abstraction	11
f1170	painting crowds of people	11
f1169	painting reflections in water	11
f3092	painting trees with eliot o'hara	16
f1131	print with a brayer	8
f3093	rembrandt: painter of man	18
f1135	space	10
f2002	the student as artist with clay	13

additional films on order

f3139	dong kingman
f3143	discovering dark and light
f3144	discovering line
f3052	discovering texture
f1174	out of a chinese painting brush

filmstrips -

fs1073 the wonders of paint

pictures

refer to the imc guide

slides (one day only)

refer to the imc guide

films - rental

introduction to ART

be gone dull care	12 minutes
color keying in ART and living	12
color magic	23
rhythm in paint	12
boundary lines	18
how an artist works	18
hen hop	

papier mache

animals	12

watercolor films

working in watercolor	25
painting shadows	12
drama of an old farm	12
painting with callegraphy	12
painting chinese landscapes	12

ART history and understanding

byzantine empire	24
native ARTS of old mexico	24
cubism	12
expressionism	12
impressionism	12
the story of chinese ART	24

rental films - title	minutes
non-objective	12
vincent van gogh	24
rembrandt	30
rembrandt - self portrait	30
leonardo da vinci	24
the renaissance	30
recovery of the mona lisa	30
ART in the western world	30
french school of painting	25
ceramics	
ceramic ARTS of japan	20
pottery making	12
craftsmanship in clay-decoration	12
craftsmanship in clay-glaze	12
craftsmanship in clay-coil	12
craftsmanship in clay-potters wheel	12
tower of clay	20
how to do films	
making a starch painting	18
exploring in paint	12
drawing with a pencil	12
crayon resist	12
oriental brush work	18

rental films	title	minutes
how to do films continued		
	moku honga	18
	phantasy	18
	paper sculpture	12
	making a mural	12
	encaustic by zembe	30
	enameling ART	18
	make a mobile	12
	design to music	12
	painting solid forms	12
	torn paper	12
	plastic sculpture in color	12
	elements of design	48
	brush techniques	12
weaving		
	homespun	24
films of interest		
	insects and painting	12
	how a commercial artist works	14
	the stylist	30
	miracle of the flowers	14
	design to music	12
	ART in motion	18
	ART in nature	18
	ART and you	12

filmstrip rentals - title	minutes
rembrandt	
michaelangelo	
daumer and his prints	
albrecht deuer	
japanese and chinese ART	
paul gauguin	
cezanne	
artists and artisians	
greek ART and artists	
renoir	
matisse - part I	
matisse part II	
van gogh	
utrillo	
mondrian	
dufy	
braque	
picasso	
klee	
toulouse-latrec	
ART in early renaissance italy	
ART in the northern renaissance	
ART in spain	
ART in united states	
ART in 19th century france	
let's look at a painting	
modernism	

field trips

(refer to field trip guide)

field trips are an important factor in effective teaching of ART appreciation, and the students are thrilled with the experience of a trip. adequate background should be given before the trip to the gallery, museum, studio or farm, since a discussion of things to look for is of valuable use.

a trip should be well planned by the instructor and some basic rules to use in doing so are as follows:

see if guides are available

make arrangement with personnel of place to be visited

inform school staff members of students attending

obtain written parental permission

arrange transportation

arrange for adequate supervision

carefully plan route and financing

discuss behavior and proper clothing to be worn.

discuss eating arrangements with students

arrange transportation for students from school to home upon return from trip - if arrival will be after dismissal.

after field trips, an assignment should be made so as to use some of the creative and stimulating experiences of the students.

you will find the students looking forward to a follow-up of the trip, whether it be discussion or painting. if this assignment is not fulfilled many times the student is disappointed.

visual ARTs vocabulary

areas

background
distance
foreground
intermediate
middle
overlap
plane
proportion
relationship
surface

color

advancing
analagous
complementary
cool
dark
fluorescent
hue
intensity
intermediate
light
monochromatic
neutral
opaque
opposite
pigment
primary
prism
receding
related
secondary
shade
spectrum
split-complementary
tint
tone
transparent
triadic
value
warm

elements

- color
- form
- line
- shape
- space (positive & negative)
- texture
- value

form

- circle
- cone
- cube
- cylinder
- ellipse
- fundamental
- geometric
- mass
- oblong
- organic
- oval
- pyramid
- rectangle
- round
- shape
- sphere
- square
- triangle
- tube

history

- abstract
- ancient
- appreciation
- classic
- contemporary
- emotion
- essence
- expressionism
- feeling
- image
- impressionism
- interpretation
- kinetic
- medieval
- memory
- modern
- non-objective
- objective
- op
- pop
- prehistoric
- primitive
- psychedelic
- realism
- renaissance
- restraint
- style
- surrealist
- symbol
- taste

lettering

- advertising
- alphabet
- calligraphy
- capital
- gothic
- guide lines
- lower case
- poster
- printing
- roman
- script
- spacing
- strokes
- text
- tracing
- upper case

line

- angry
- blurred
- boundary
- contour
- curve
- diagonal
- direction
- divided
- dynamic
- edge
- horizontal
- limit
- limited
- movement
- parallel
- playful
- point
- restful
- sharp
- static
- vanish
- vertical

materials and tools

- abrasives
- acid
- acrylic
- adhesives
- arbor
- asbestos
- balsa
- baren
- bats
- beeswax
- bench pin
- blade
- blanks
- blotter
- brass
- brayer
- bristol
- brush
- buff
  - cotton or felt
- buffer-grinder
- burnisher
- "c" clamp
- canvas
- chalk
- charcoal
- chasing tools
- chisel
- chuck collet
- cilocus
- clay
- compass
- cones
- conte
- crayons
- craypas
- cutter
- drawing board
- drill
- dye
- easel
- emery cloth
- emulsion
- enamel
- engobe
- eraser
- fabric
- files
  - needle
  - wood
- findings

materials and tools (continued)

- fixative
- flexible shaft
- flux
- frame
  - carpet
  - picture
- glaze
- grog
- grout
- hammer
  - claw
  - ball pein
  - chasing
- handpiece
- ink
  - india
  - litho
  - silk screen
  - textile
- jeweler's saw frame
- kiln
- knives
  - stencil
  - fettling
  - x-acid
  - palette
  - mat
  - sloyd
- lapidary
- leather
- litho
- liver of sulphur
- loom
- mallet
- mandrel
  - ring
  - buffing
- mat board
- metal
- modelers
- mold
- oil
- paint
- palette
- pan
- paper
  - smooth
  - textured
  - fabric
- paste
- pastels
- pen
- pencil
- pickle
- plaster
- plastic
- plate
  - wood
  - plastic
- pliers
  - jewelers
- potters wheel
- press - graphics
- propane torch
- punch

materials and tools (cont.)

- pyrometric cone
- raffia
- rasp
- razor blade
- reed
- ring clamp
- rouge
- rulers
- sandpaper
- saw
  - coping
  - hack
- scissors
- scrapers
- scratchboard & knives
- screwdrivew
- sgraffito tools
- shellac
- shuttle
- silk screen
  - organdy
- silver
  - sterling
- slip
- solder
- solvents
- spatula
- sponge
- squeegee
- stapler
- steel wool
- stencil
- stencil board
- stilt
- stumps
- t - square
- tape
- tempera
- textile ink
- tinners snips
- tissue
- tjanting needle
- tousche
- triboll
- turpentine
- varnish
- vermiculite
- vise
- wax
- wheels
- wood

subject matter

community
contour
costume
exhibit
exterior
figure
home
imagination
industrial
interior
landscape
memory
moods
nature
perspective
portrait
reference
scenery
seascape

techniques

architecture
brush
carve
casting
ceramics
chip
coil
collage
crafts
drawing
etch
experiment
incising
interior design
laminate
lettering
lithograph
manipulate
mishima
mobile

technique (continued)

- montage
- oil
- painting
- papier mache
- photographic
- printing
- relief
- render
- resist
- scratch
- sculpture
- seriozraph
- sgraffito
- silk screen
- slab
- spray
- stabile
- stencil
- stipple
- texture
- throwing
- watercolor
- weaving

texture

- particles
- rough
- scratch
- smooth
- spray
- stipple
- structure

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- mondrian paintings
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